

USI No.92 Newsletter

3月 Mar 2023

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Opening of the New Year

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Adversity Reveals Genius

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資深員工專訪
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Talents in USI: Senior
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Huizhou and Kunshan Site



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新春寄語

作者：董事長 / 陳昌益

我們迎來了 2023 年的春天，全世界翻開了新的篇章，隨著各國疫情控制和入境政策的相繼放寬，各國政府和企業也陸續在積極推動復甦和發展。

回想過去三年，我看到我們環旭的員工直面困境、奮勇前行、逆勢而上，取得了卓越的成績，環旭的營收一路增長，淨利潤不斷提升。這樣的成績值得我們每一個環旭人感到驕傲。作為公司董事長，我要向辛勤工作在各個崗位上的同仁們、夥伴們及你們的家屬，致以最誠摯的感謝，感謝你們持續的付出，不懈的努力！謝謝大家，你們辛苦了！

在經濟全球化的今天，基於世界經濟格局中的種種不穩定因素影響，如：貿易保護主義、地緣政治、科技戰、貨幣戰、全球疫後復甦、俄烏衝突等，人們對全球化的認知已發生改變。經濟全球化的本質是互聯互通，而各種因素導致的限制、隔斷，使世界大戰後重新建立起的全球化 2.0 遭遇巨大衝擊。供應鏈重組、在地化整合將是未來地緣政治下的發展趨勢，因此，大型企業紛紛轉向「全球在地化」佈局，積極調整產業發展模式，增強自身供應鏈彈性和韌性，並培養供應鏈抗風險能力。

針對「全球在地化」，環旭電子的供應鏈佈局亦早已起步，目前我們已在歐美亞非四大洲設立了 28 個生產據點，包括越南、墨西哥、波蘭等地，全球員工亦已超過 24,000 人。以環旭目前的規模和體量，我們的高管及各崗位上的同仁們身上都肩負著一家大型全球化公司的企業社會責任。

拋開疫情因素後，全球經濟仍面臨著貿易保護主義、地緣政治、貨幣危機、債務危機等問題。這些都會使得全球經濟出現波動，發展受到阻礙。所以，2023 年仍將是極具挑戰的一年。因此，我想跟同仁們分享哈佛教授南希·科恩在 2017 年出版的《危機鑄就領袖》一書。書中講述了過去一兩百年間五位不同時代背景下的英雄，在面臨困難時各自如何找到自己的使命，克服困難，完成使命。作者在寫書時自己也經歷了人生的重大變故，而這五位英雄的事蹟也協助她渡過了這段期間。

這五位擁有領袖氣質的英雄都具備高度的專注力、責任感以及臨危不亂的人格特質，在面對挑戰時能夠充分展現自身韌性。這種領導力並不是與生俱來的，而是環境造就的。每個故事都蘊含著一個道理，必須經歷無數次的失敗、內心的恐懼和諸多的不確定性，才能逐漸形成自身強大的韌性，才能練就領導力。

這非常符合目前的局勢，一個企業必須要經歷種種挑戰，才能磨煉出企業的韌性，而領導者也要不斷修正決策，在不同的生命議題中找到平衡，最終完成領導者的使命。因此，在 2023 年的新春，我想把這本書推薦給大家。

未來，我希望環旭能夠在關注世界格局和經濟形勢的同時，做好應對各種風險和挑戰的準備。也期許我們每一位員工都能夠把握時機，借助公司在全球化的發展機會，實現自我成長與突破，在工作中坦誠互信，團結合作，直面挑戰，以公司利益作為我們的決策標準，以公司發展作為我們的前進目標，共建環旭未來 10 年的美好發展藍圖。

Opening of *the New Year*

Author: Chairman / Jeffrey Chen

The world has opened a new chapter as we enter the spring of 2023. With the successive easing of pandemic control and adjustment of entry policies, governments and enterprises worldwide show initiatives in promoting economic recovery and growth.

Looking back over the past three years, I have witnessed how our USI team faced difficulties and finally achieved outstanding results. USI's revenue has grown, and our net profit has increased continuously. Such performances deserve pride. As the chairman of USI, I would like to extend my sincere gratitude to all colleagues working hard in different positions, together with your families. Thank you for your continued dedication and unremitting efforts! Thank you all for your hard work!

In today's economic environment, due to various unstable factors in the world's economy, such as trade protectionism, geopolitics, technology wars, currency wars, global post-pandemic recovery, Russia-Ukraine conflicts, etc., people's perceptions of globalization have changed. The essence of economic globalization was interconnection, but restrictions and isolation caused by various factors made a huge impact on Globalization 2.0, which was re-established after World War II. Supply chain diversification and localization are expected trends in future geopolitics. Therefore, large enterprises are coming up with a new "Glocalization" layout, actively adjusting the industrial model, enhancing the flexibility and resilience of supply chains, and cultivating their anti-risk capabilities.

As for glocalization, USI has already started the global strategic layout. Currently, we have established 28 production bases in Europe, America, Asia and Africa, including Vietnam, Mexico, Poland and other places, with more than 24,000 employees worldwide. With the current company scale, our colleagues in all positions shoulder the corporate social responsibility of a large global corporation.

Putting aside the pandemic factor, the global economy still faces unstable factors, such as trade protectionism, geopolitics, currency crisis, debt crisis, etc. These will cause fluctuations in the global economy and hinder development. The year 2023 will be highly challenging. I would like to share a book, *Forged in Crisis: The Power of Courageous Leadership in Turbulent Times*, published by Harvard professor Nancy F. Koehn in 2017. The book tells stories of five heroes in different historical backgrounds in the past one or two hundred years - how they confronted difficulties, overcame them, found their core strength, and made the mark. The author was also experiencing life obstacles while writing the book, and the stories of these five heroes helped her to get through the tough period.



All five heroes have leadership qualities, high concentration, a strong sense of responsibility, and unruffled personality traits that can fully demonstrate their resilience in facing challenges. Such leadership is not innate but externally developed. Each story conveys that to cultivate leadership, one must experience countless failures, inner fears and many uncertainties and gradually find one's strong resilience.

The book quite fits the current environment. An enterprise must overcome various challenges amid crises to be resilient. And leaders need to maneuver constantly, find a balance, and finally accomplish their mission. In the opening of 2023, I highly recommend the book to you all.

Hereafter, I hope USI could prepare to manage various risks and challenges while paying attention to global trend and economic environment. And I hope everyone in USI could seize the opportunity, take advantage of USI's global development, realize your self-growth and breakthroughs, be open and trustworthy, unite and cooperate, face challenges with bravery, take the company's interests as your decision-making criteria, and treat the company's development as your goal to create a more brilliant future for USI in the next decade!

Apertura del *Año Nuevo*

Autor: Presidente / Jeffrey Chen

El mundo ha inaugurado un nuevo capítulo al entrar en la primavera de 2023. Con la sucesiva reducción del control de pandemias y el ajuste de las políticas de entrada, los gobiernos y las empresas de todo el mundo muestran iniciativas para fomentar la recuperación económica y el crecimiento.

Repasando los últimos tres años, compruebo cómo nuestro equipo de USI ha afrontado las dificultades y finalmente ha logrado resultados sobresalientes. Los ingresos de USI han crecido, y nuestro beneficio neto ha aumentado continuamente. Tales actuaciones merecen orgullo. Como presidente de USI, me gustaría expresar mi más sincero agradecimiento a todos los colegas que han trabajado duro en diferentes puestos, junto con sus familias. ¡Gracias por vuestra dedicación continua y vuestros esfuerzos incesantes! ¡Gracias a todos por vuestro esfuerzo!

En el entorno económico actual, debido a diversos factores inestables en la economía mundial, como el proteccionismo comercial, la geopolítica, las guerras tecnológicas, las guerras de divisas, la recuperación mundial tras la pandemia, los conflictos entre Rusia y Ucrania, etc., la percepción de la población sobre la globalización ha cambiado. La esencia de la globalización económica era la interconexión, pero las restricciones y el aislamiento provocados por diversos factores tuvieron un enorme impacto en la Globalización 2.0, que se restableció tras la Segunda Guerra Mundial. En el futuro, la diversificación de la cadena de suministro y la localización son tendencias previstas en la geopolítica. Por consiguiente, las grandes empresas están concibiendo un nuevo

esquema de "Globalización", ajustando activamente el modelo industrial, mejorando la flexibilidad y resistencia de las cadenas de suministro y cultivando sus capacidades anti-riesgo.

Con la magnitud actual de la empresa, nuestros colegas de todos los puestos asumen la responsabilidad social corporativa de una gran empresa mundial.

Aparte del factor pandémico, la economía mundial sigue enfrentándose a factores inestables, como el proteccionismo comercial, la geopolítica, la crisis monetaria, la crisis de la deuda, etc. Todos ellos provocarán fluctuaciones en la economía mundial y dificultarán el desarrollo. El año 2023 será altamente desafiante. Me gustaría compartir un libro, "Forjado en la crisis: El poder del liderazgo valiente en tiempos turbulentos", publicado por la profesora de Harvard Nancy F. Koehn en 2017. El libro cuenta historias de cinco héroes en diferentes contextos históricos en los últimos cien o doscientos años-- cómo ellos afrontaron dificultades, las superaron, encontraron su fuerza central, y marcaron la diferencia. La autora también experimentó obstáculos vitales mientras escribía el libro, y las historias de estos cinco héroes le ayudaron a superar este duro periodo.



Todos los cinco héroes tienen cualidades de liderazgo, alta concentración, un fuerte sentido de la responsabilidad y rasgos de personalidad inquebrantable que pueden demostrar plenamente su resiliencia a la hora de enfrentarse a los retos. Ese liderazgo no es innato, sino desarrollado externamente. Cada relato demuestra que, para cultivar el liderazgo, hay que experimentar innumerables fracasos, miedos internos y muchas incertidumbres y, gradualmente, encontrar la propia capacidad de resistencia.

El libro refleja perfectamente el entorno actual. Una empresa debe superar diversos retos en medio de las crisis para ser resiliente. Y los líderes deben realizar constantes maniobras, encontrar un equilibrio y,

finalmente, cumplir su misión. En la apertura de 2023, les recomiendo encarecidamente el libro a todos.

En lo sucesivo, espero que USI pueda prepararse para gestionar diversos riesgos y desafíos prestando atención a la tendencia global y al entorno económico. Y espero que todos en USI puedan aprovechar la oportunidad, tomar ventaja del desarrollo global de USI, realizar su propio crecimiento y progresos, ser abiertos y confiables, unirse y cooperar, enfrentar los desafíos con valentía, tomar los intereses de la compañía como su criterio de toma de decisiones, y tratar el desarrollo de la compañía como su objetivo para crear un futuro más brillante para USI en la próxima década!

疾風知勁草

作者：總經理暨營運長 / 魏鎮炎



2022 歲末，透過年度策略規劃，我們確立公司發展的方向不變，仍以模組化、多元化、全球化、垂直整合及智慧製造為主軸，持續增強微小化解決方案和車用功率模組兩大領域的投資。為了因應地緣政治的興起，我們擴大北美、東南亞、歐洲的生產能量，積極開發在地彈性穩定的供應鏈，並成立區域性 EMS BU 以直接服務在地客戶。2023 開春，各項工作計劃就要逐一展開落實。

過去數年來，都是新春就見到市場暢旺的景象，營業預測週週上調。2023 年不同以往的是，大家對市場前景，尤其是上半年，普遍都不看好。雖然各國對新冠疫情的控制陸續解除或降低，明顯刺激了終端消費，但供應鏈上過高的庫存，至少需要兩個季度才能調整到合理的水平。

有關庫存的議題，我們從 2022 年的年中就開始進行優化，因此大致上沒有造成什麼嚴重的問題，2023 年只要持續監測追蹤即可。然而，鑒於外在經濟環境不佳，我們必須及早因應，若要達成主要的財務目標，那麼費用和成本控制，就變得刻不容緩，尤其是人力增補及資本支出，更是 2023 年上半年的重點工作。

我們的人力計劃以及各項成本和費用預算，有一部分是要達成今年的目標，另外一部分則是對未來成長的先期投資，一旦進行管控緊縮，就難免會互相排擠。那麼有限的資源究竟是要用在短期目標的達成，還是要投注在長期計劃的項目呢？取捨之間，考驗著各級管理者的智慧。無論是人力安排或資本支出，樣樣都要更審慎，讓每個人和每塊錢都能發揮最大的效益。

景氣循環是意料中的事，但當不景氣來得又快又急的時候，適應不過來的公司就難免受創甚至倒閉。俗話說疾風知勁草，當面臨挑戰的時候，正是我們獲得成長茁壯的契機。期許同仁們珍惜這個機會，勇於承擔，一起克服困難保持佳績！

Adversity Reveals *Genius*

Author: President & COO / CY Wei



At the end of 2022, through the annual strategic planning, we have confirmed that the company's development direction remains unchanged. Modularization, diversification, globalization, vertical integration, and smart manufacturing are still the main axes, and we are going to put more investment in the two major segments which are miniaturized solutions and automotive power modules. In reaction to the geopolitics, our production capacity in North America, Southeast Asia and Europe has been expanded, a flexible and stable local supply chain has been actively developed and a regional EMS BU has been formed to directly serve our customers locally. From the spring of 2023, each working plan is going to be implemented progressively.

For the past few years, the market was booming since the start of the year, with business forecasts increasing week by week. The difference in 2023 is that the market outlook is generally not optimistic, especially in the first half of the year. Although the control of the new crown epidemic has been lifted or reduced in many countries, which obviously stimulates the end-market consumption, excessive inventory in the supply chain will take at least two quarters to adjust to a reasonable level.

As for the inventory issue, we have been optimized it since mid-2022, so there is no serious problems for us in general, and we just need to keep monitoring and tracking it in 2023. However, given the negative external economic environment, it is imperative for us to control the expenses and costs if we are to achieve our key financial objectives. Our priority will be focused on the headcount and capital expenditure control in the first half of 2023.

Part of our manpower plan, and cost and expense budget is to achieve the goals of this year, while the other part is as upfront investment for the future growth, which will inevitably crowd each other out once the control is tightened. The wisdom of management at all levels will be tested by the trade-off between whether limited resources should be spent on achieving short-term goals or on long-term projects. To make best use of everyone and every dollar, we must be more prudent, no matter arranging manpower allocation or spending capital expenditure.

The economic cycle is expected, but when the recession comes fast and furious, companies that fail to adapt may inevitably be hurt or even collapsed. As the saying goes, Adversity Reveals Genius, it is an opportunity for us to grow and thrive when facing challenges. I look forward to seeing our colleagues to cherish this opportunity and be brave to assume the responsibility to overcome difficulties to keep good performance together!

La Adversidad Revela *el Genio*

Autor: Presidente y Director de Operaciones / CY Wei



A l final de 2022, mediante la planificación estratégica anual, hemos establecido que el rumbo de desarrollo de la empresa permanece inalterado. La modularización, la diversificación, la globalización, la integración vertical y la fabricación inteligente siguen siendo los principales focos, y vamos a invertir más en los dos segmentos principales de soluciones miniaturizadas y módulos de potencia para automoción. En respuesta a la geopolítica, hemos ampliado nuestra capacidad de producción en Norteamérica, el Sudeste Asiático y Europa, hemos desarrollado activamente una cadena de suministro local flexible y estable y hemos creado una unidad de negocio regional de EMS para atender directamente a nuestros clientes. partir de la primavera de 2023, vamos a aplicar progresivamente cada plan de trabajo.

En los últimos años, el mercado estuvo en auge desde el comienzo del año, con previsiones de negocio que aumentaban semana tras semana. La diferencia en 2023 es que, en general, las perspectivas del mercado no son optimistas, sobre todo en el primer semestre.

Aunque el control de la epidemia de la nueva cepa se ha levantado o reducido en muchos países, lo que obviamente estimula el mercado final de consumo, el exceso de existencias en la cadena de suministro tardará al menos dos trimestres en ajustarse a un nivel razonable.

Con respecto al asunto del inventario, lo hemos optimizado desde la mitad de 2022, por lo que no hay ningún problema grave en general, y solo tenemos que seguir supervisándolo y controlándolo en 2023. Sin embargo, dado el negativo entorno económico externo, es imperativo que controlemos los gastos y costes si queremos alcanzar nuestros objetivos financieros clave. Nuestra prioridad se centrará en el control de los empleados y de los gastos de capital en el primer semestre de 2023.

Una parte de nuestro plan de personal y del presupuesto de costes y gastos se destina a alcanzar los objetivos de este año, mientras que la otra es una inversión anticipada para el crecimiento futuro, que inevitablemente se irán desplazando unas a otras una vez que se refuerce el control. La sabiduría de la gestión a todos los niveles se verá puesta a prueba por la decisión de si los limitados recursos deben gastarse en alcanzar objetivos a corto plazo o en proyectos a largo plazo. Para aprovechar al máximo todos y cada uno de los dólares, debemos ser más prudentes, tanto en la asignación de recursos humanos como en el gasto de capital.

El ciclo económico está previsto, pero cuando la recesión llega rápida y furiosa, las empresas que no sepan adaptarse pueden verse inevitablemente perjudicadas o hasta quebrar. Tal y como dice el refrán, la Adversidad Revela el Genio, es una oportunidad para que crezcamos y prosperemos cuando nos enfrentamos a retos. Espero que nuestros colegas aprendan a aprovechar esta oportunidad y asuman con valentía la responsabilidad de superar las dificultades para mantener juntos un buen rendimiento.

USI 人才圖鑑

資深員工專訪 惠州·昆山篇

採訪編輯：總經理室 / 行銷企劃部

USI 昆山廠與惠州廠人才濟濟，有許多懷抱雄心壯志的人千里迢迢前來，無非就是想要在此提升自我，創造卓越。本次，我們邀請來自惠州廠與昆山廠的兩位同仁，分享他們的故事。



惠州廠 / 製造服務三處

曾玉梅

2007 年，來自湖南的玉梅加入 USI 深圳廠，從流水線上的普工做起，之後經歷過全能員、領班，她於 2013 年成為產線組長。對玉梅而言，同事跟上司就跟兄弟姊妹一樣，遇到困難都會伸出援手，友善的工作氛圍是她持續待在 USI 的原因。

在 USI 工作超過 15 年，最讓玉梅印象深刻的還是轉移惠州這件事，PD3 是第一批部門前來惠州的，身為第一個過來的產線組長，從剛開始的員工調查到安

裝產線，無役不與。當時她與兩個老員工剛到惠州廠時，發現條件十分艱辛，他們必須在沒有燈光跟空調的車間中，戴著安全帽拿著移動電源架流水線，但憑著不服輸的精神，第一天就成功架好兩條流水線！從零開始，直到後來完成了 13 條線，她感到十分欣慰，玉梅表示：「看到這個成果，就覺得人的潛能是無限的，而這都要感謝兄弟姊妹們無條件的支持我來到惠州！」

「把員工當朋友來對待。」玉梅提到她的管理風格。自己過去也是一線員工出身，所以會常站在下屬的立場考慮，假如員工遇到困難或想要離職，她會先從員工身邊的朋友間接了解一下狀況，再實際與員工談談，最後願意繼續留下來打拼的人還是有很多。喜歡戶外活動的她，之前在當領班時也常揪同仁一塊出去走走，側面觀察，多與他們相處，「人心換人心嘛！你把他們當作朋友平等看待，他們一定感受的到，你就能更容易解決問題。」而面對不同年代的人也要以不同方式去管理，隨著 00 年代踏入職場，又是一個新的管理挑戰，因此管理方式也需因人而異、與時俱進，這是玉梅深深體會到的。

回顧過往，玉梅認為自己成長了不少。以前時常猶豫，但當上管理職後，自己更能夠自信果斷地去做決

策。聊到從深圳搬到惠州的生活，她也有許多感慨，習慣了深圳的繁華，剛到惠州時發現交通跟生活都不便，但心境一轉，這裡的房租便宜，也不用特別早起擠公交去上班，生活節奏慢，不也是一大樂事？玉梅說：「不是環境來改變我，而是我要去改變它，重點是要在這過得幸福，現在我跟一起來惠州打拼的兄弟姐妹們週末沒事就一起吃飯聚聚，今天去你家，明天去他家，感情也更融洽了！」

「態度就是一切。」是玉梅的信條，工作上秉持不服輸的精神，主管交代的工作就要盡我所能去完成，同時也要活到老，學到老。生活上境隨心轉，一切都往好的方向去想。最後，她想要感謝支持她的上司與同事，不斷提供新的機會給她學習，也願意在她犯錯時提供指教，她也給自己立下了期望，無論是家庭、工作、生活，未來都能與 USI 一起變得更好！



昆山廠 / KS 製造服務三處

周滿良

USI 是滿良的第一份工作。大學時期，學校積極地安排就業機會，當時他認為 USI 的技術與產品較為先進與具有發展力，因此走進了 USI 的世界，起初滿良在上海廠的測試工程部工作，2008 年他轉到生產六部擔任組長，2011 年隨著客戶產線搬遷到昆山的計畫，他與幾個員工到了昆山，一起架了第一條生產線，之後成為昆山廠的一份子，隨著不斷努力與進步，現在他已是 SMT 課的課長，負責 SMT 生產、良率、成本節省等專案。

「我喜歡有创造性的工作，更能挑戰自己。SMT 這邊有很多硬性指標，我會帶著員工一起去達成，這樣也比較有意思。」滿良提到他轉換部門的初衷，USI 提供了很多機會，當一個工作做到可以輕鬆達成時，他就會想要到別的部門嘗試新的挑戰，讓自己不陷於安逸。

在工作之餘也不忘學習，滿良在去年還考了在職研究所，至今持續進修機電工程。他表示，公司主管都對此給予支持，這是很多公司都不會有機會，他特別感謝這一點。滿良也將這個想法落實在管理員工上，除了賦予他們更多機會、關懷工作狀況、提供更好的工作環境外，他也鼓勵組長們攻讀本科，有許多組長都順利拿到更好的文憑。他說，很多人到了某個門檻就走不動了，這時候就要靠學習精進自己。

2020 年新冠疫情的爆發讓滿良非常難忘，當時人力緊缺狀況不容樂觀，他在春節即提前返崗，配合廠內防疫工作安排，透過疫情知識課程來減少員工的恐懼心理，此外面對缺少熟練的作業員也是一大問題，他



與同事們制定簡易的上崗培訓手冊，每天進行員工崗位輪換，訓練他們對崗位技能的熟練度，加大產出，穩定產能，共同度過難關。

滿良喜歡運動，他加入了昆山廠的羽球社和跑步社，鍛鍊身體。工作上以知識服人，下班後以球藝會友，在社團中也認識了許多新同事，大家也能更熟悉彼此，這也是強化昆山廠同仁向心力與衝勁的關鍵。

工作那麼多年，難免遇到瓶頸，或是查覺到自身的思維已經固化，滿良強調，保持學習跟上世代是很重要的，如果缺少學習，就成了閉門造車。除了工程的知識外，如何做好員工管理也是一門學問，這也是他未來想要持續努力的課題。滿良想要感謝工作一路上遇到的主管們，他從他們身上學到了許多經驗，未來的他，將繼續突破自我，向前邁進拚搏！

Talents in USI

Senior Employees' Stories— Huizhou and Kunshan Site

Interviewed by: President Office / Marketing Communication

USI Kunshan and Huizhou sites have numerous talents. Many of them came to USI with the ambition to enhance themselves and create excellence. This time, we have invited two employees from Huizhou and Kunshan sites to share their stories with us.



Huizhou Site / PD3
Yumei Zeng

In 2007, Yumei who comes from Hunan joined Shenzhen Site and started her career life at USI as an operator on the assembly line. Afterwards, she was upgraded to deputy foreman, foreman and eventually the supervisor of the production line in 2013. For Yumei, her colleagues and supervisors are like her brothers and sisters as they always support each other when encountering difficulties. The friendly work atmosphere is the reason why she stays at USI.

Over the 15 years working at USI, what impressed Yumei the most is being transferred to Huizhou site. PD3 was the first department transferred to Huizhou and, as the first team leader, she participated in every process from surveying employees in the beginning to setting up the production line. Upon her arrival at Huizhou Site with two senior employees, they realized that the site had very difficult conditions as they had to put on helmet and hold portable power to

set up production lines among workshop without lighting and conditioning system. Nevertheless, with the persistence, they succeeded in setting up two production lines on the first day! As they started from nothing to successfully set up 13 productions lines, she was very gratified with their efforts. Yumei says "When seeing the results, we feel that human potential is unlimited. I have to thank all my colleagues who supported me to come to Huizhou."

"Treating employees as friends" Yumei shares her management style with us. Yumei was once an operator as well, so she often considers from the position of her subordinates. If an employee suffers from a difficult or wants to resign, she will try to understand the actual situation from the employee's friends indirectly first and then talk about it with that employee. According to her experience, many of them



will decide to stay at USI. Yumei is also fond of outdoor activities. When she served as a foreman, she often invited her colleagues to hang out with her to interact with them more. "How you treat the others is how the others treat you! If you treat them fairly as friends, they will feel it and you will be able to solve the problems easily." Nevertheless, people of different eras shall be managed in different ways. As people born in the 2000s are stepping into the work place, there will be another new challenge in terms of management. Therefore, Yumei's experience tells her that one's management style has to change with people and progress with time.

Looking back to the past, Yumei thinks that she has grown a lot. In the past, she often hesitates and, after becoming a leader, she is capable to make decisions even more confidently and resolutely. When talking about her life from Shenzhen to Huizhou, she says that, as Shenzhen is a comparatively bustling city, she was in a great inconvenience – in terms of transportation and life – when she firstly arrived in Huizhou. Nevertheless, she then changed her mood and thought that "The rent here is cheap and there is no need to squeeze onto the bus to work. The place is also slow-paced, isn't it great to work here?" Yumei says "It is not right to let the environment to change me. Instead, I have to change the environment. The



most important thing is that I have to be happy here. Now, on the weekend, I often dine out with my friends who work in Huizhou together. This has made our friendship even more harmonious!"

"Attitude is everything" is the doctrine of Yumei. At work, she holds the spirit of persistence and always does her best to complete the mission given by her supervisor. Simultaneously, she also understands that one is never too old to learn new things; and, when the environment changes, she always changes her mood to think positively. Finally, she wants to thank her supervisors and colleagues who continuously give her new learning opportunities and to guide her when she makes mistakes. She also set a goal for herself: regardless of family, work or life, she will become better together with USI!



Kunshan Site / KS PD3
Manliang Zhou

Working at USI is Manliang's first work. When he studied at university, his school had proactively arranged employment opportunities for him. As he thought that USI's technology and products were relatively more advanced and had a good potential, he therefore entered the world of USI. In the

beginning, he served at the TE Department of Shanghai Site. Later in 2008, he was transferred to PD6 and served as a supervisor. As one of the production lines was moved to Kunshan in 2011, he and some other employees arrived in Kunshan and set the first production line together; and then

became a member of Kunshan site. With Manliang's continuous efforts and progress, he is now the Section Manager of SMT Section who is in charge of the production, yield rate and cost saving of SMT.

"I like creative jobs as they help to further challenge myself. Here at the SMT Section, there are many challenging KPIs that I would like to reach with my employees. This is also a very interesting." Manliang told us his original intention of changing to the current department. He says that USI provides many opportunities to employees and, when he thinks that he can nail a work well, he tends to go to another department to take new challenges, instead of staying in his comfortable zone.

Apart from his works, Manliang likes to learn new things: He was even admitted to a graduate school last year and is now carrying on studying mechanical and electrical engineering. He expresses that his boss also supports his decision, and he is especially thankful for it as this is an opportunity that is rarely provided in other companies. Manliang also puts the same thinking in practice when managing his subordinates. Apart from giving them more opportunities, caring about their work status and providing them with a better workplace, he also encourages supervisors to continue their studies in the field and many of them successfully obtained a better graduate certificate. Manliang indicates that many people stop to move when they reach a specific threshold, and this is in fact the exact moment that we must further enhance ourselves by continuing our studies.



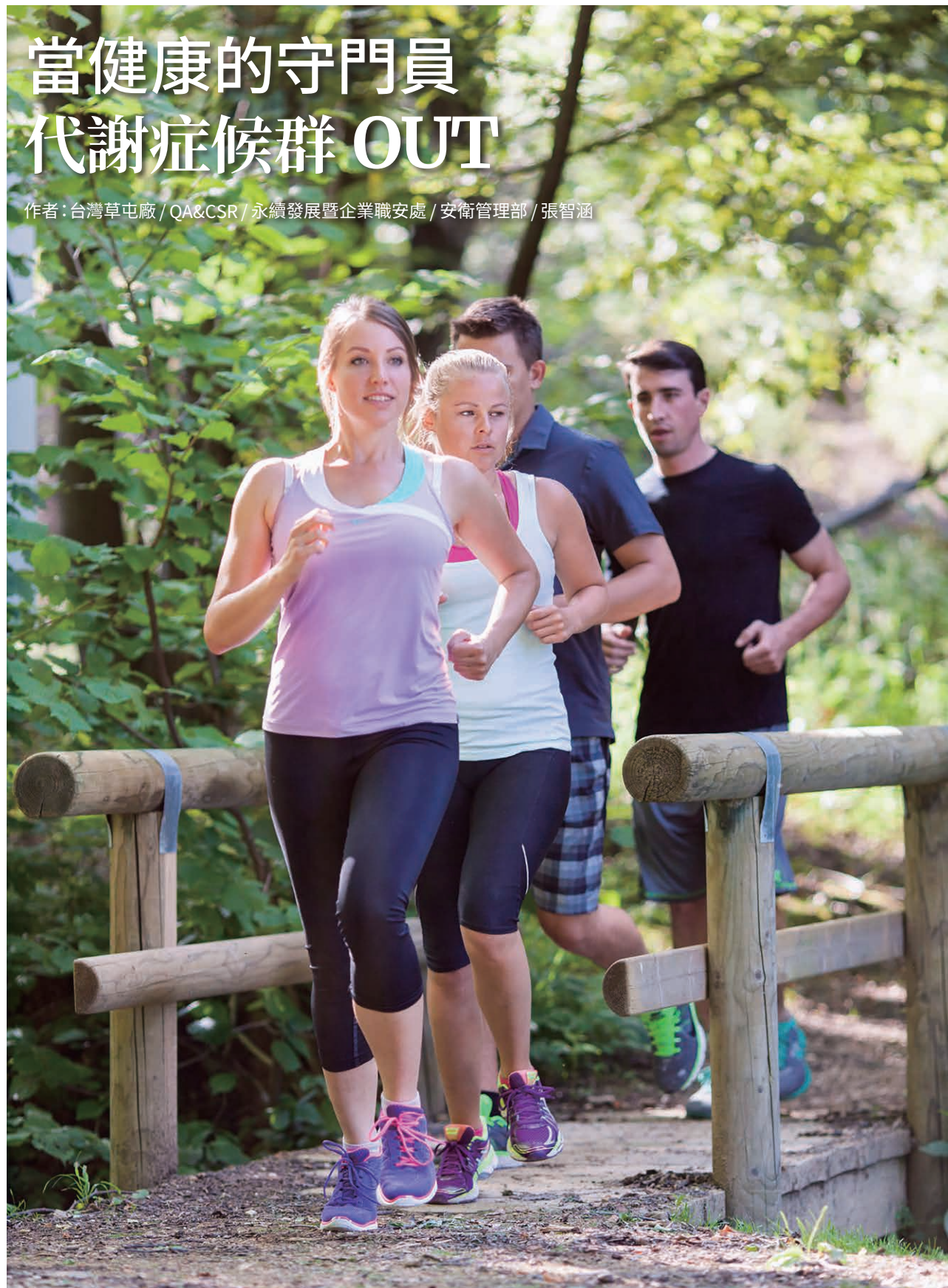
The outbreak of COVID-19 in 2020 was an unforgettable moment of Manliang. At that time, the manpower shortage situation was not optimistic. He returned to USI during the Chinese New Year to arrange pandemic prevention works, such as pandemic knowledge related workshops that can reduce employees' fear. Besides, the shortage of skilled workers was also a big problem. To increase the output and stabilize the production volume, he and his colleagues made a simple introductory training manual and arranged shifts on a daily basis to train workers' skills and overcame this difficulty together.

Manliang enjoys doing exercise to train his physique, he has joined the badminton and jogging clubs of Kunshan site. At work, he convinces people with knowledge; after work, he makes friends with badminton skill. Through the club activity, he gets to know many colleagues, becoming familiar with each other. This is also one of the keys that has enhanced the teamwork spirit and momentum of Kunshan site.

After working for so many years, it is inevitable to encounter bottlenecks or be aware of one's solidified thinking. Manliang emphasizes that it is important to keep learning to catch new trends. If one fails to learn new things, one will be living in his/her own world. Apart from engineering related knowledge, manage employees well is also a branch of knowledge that he wants to continue learning. Manliang wants to thank all managers whom he has encountered in his career life as he has learned a lot from them. In the future, he will continue to challenge himself and stride forward!

當健康的守門員 代謝症候群 OUT

作者：台灣草屯廠 / QA&CSR / 永續發展暨企業職安處 / 安衛管理部 / 張智涵



隨著飲食習慣與生活型態的改變，代謝症候群 (Metabolic Syndrome) 的盛行率有逐年上升的趨勢。以台灣為例，依據國民健康署 2017 到 2020 年國民營養健康狀況變遷調查，19 歲以上民眾代謝症候群盛行率為 34.6%，相當於每 3 人當中就有 1 人罹患代謝症候群，其中男性的盛行率 (39.3%) 又高於女性 (30.3%)。

什麼是代謝症候群

代謝症候群是一群代謝異常的組合，包括有高血壓、高血糖、血脂異常與肥胖，且與心血管疾病及其他慢性病之危險性有極為密切的關係，若不及早檢查治療，則會增加糖尿病、心血管疾病、高血壓、腦中風等疾病的發生率及死亡率。其中代謝症候群者得到糖尿病的風險為一般人的六倍，高血壓為四倍，高血脂症為三倍，心血管疾病、腦中風為兩倍，對健康產生很大的危害。

代謝症候群 5 指標自我檢測

代謝症候群有 5 個指標：三高（血壓高、血糖高、血脂高）和二害（腰圍過粗、好的膽固醇不足），若包含 3 項或以上者，即可判定為擁有代謝症候群；有任一項者即屬於代謝症候群高危險群，以下是指標的條件：

- 腹部肥胖：男性腰圍 ≥ 90 cm（35 吋）；女性腰圍 ≥ 80 cm（31 吋）
- 血壓過高：收縮壓 ≥ 130 mmHg / 舒張壓 ≥ 85 mmHg
- 高密度脂蛋白膽固醇 (HDL-C) 偏低：男性 <40 mg/dl；女性 <50 mg/dl
- 空腹血糖值偏高： ≥ 100 mg/dl
- 三酸甘油酯偏高： ≥ 150 mg/dl

為什麼會得到代謝症候群？

造成代謝症候群的發生與年齡、不良的生活型態及遺傳基因有關，而肥胖及不良的生活型態是最重要的潛在危險因子，低纖、高糖、高油脂飲食與飲酒習慣的人容易有代謝症候群，而家族中有高血壓、糖尿病及高血脂的人，其機率也會比一般人高。另外，壓力造成內分泌失調，導致血糖上升，長時間也容易造成代謝症候群。

預防代謝症候群 5 大招

- 聰明選、健康吃：六大類健康飲食營養均衡很重要，運用「三低一高」（低油、低糖、低鹽、高纖）的健康飲食口訣
- 站起來，動 30：減少久坐，一天至少運動 30 分鐘。
- 不吸菸、少喝酒
- 壓力去，活力來：適當紓壓，如運動、閱讀、聽音樂、寫日記等，改變對於事件的看法，正向思考，尋求家人朋友協助。像 USI 的南投廠區聘有特約合格心理諮商師，每位員工每年有四次免費諮詢服務，如必要時得展延次數，可向醫務室申請。
- 做檢查，早發現

Be a Health Goalkeeper Get Out of the Metabolic Syndrome

Author: Taiwan Tsautuen Site / QA&CSR / S&HS / HS / Cindy Chang



The currency of metabolic syndrome has an increasing trend year by year with changes in eating habits and lifestyle. Taking Taiwan as an example, the prevalence rate of metabolic syndrome among people over the age of 19 is 34.6%, according to the 2017-2020 Nutrition and Health Survey in Taiwan conducted by the Health Promotion Administration. It is equivalent to 1 out of 3 people suffering from metabolic syndrome, and the currency rate of men (39.3%) is higher than that of women (30.3%).

What is Metabolic Syndrome?

A metabolic syndrome is a group of metabolic abnormalities, including hypertension, hyperglycemia, dyslipidemia, and obesity. It has a very close relationship with the risk of cardiovascular disease and other chronic diseases. People will increase their incidence and mortality of diabetes, cardiovascular disease, high blood pressure, and cerebral apoplexy if they do not check and treated early. Compared with ordinary people, people with metabolic syndrome have six times the risk of diabetes, four times the risk of high blood pressure, three times the risk of hyperlipidemia, and twice the risk of cardiovascular disease and cerebral apoplexy. They will cause considerable harm to health.

Five Indicators for Self-testing of Metabolic Syndrome

Metabolic syndrome has five indicators: three highs (high blood pressure, high blood sugar, and high blood lipids) and two harms (excessive waist circumference and shortage of good cholesterol). We can judge people having metabolic syndrome if they have three or more items. Those who have any one of them belong to the high-risk group of metabolic syndromes. The following are the conditions for the indicators:

- Abdominal obesity: male waist circumference ≥ 90 cm (35 inches); female waist circumference ≥ 80 cm (31 inches)
- High blood pressure: systolic blood pressure ≥ 130 mmHg / diastolic blood pressure ≥ 85 mmHg
- Low high-density lipoprotein cholesterol (HDL-C): male < 40 mg/dl; female < 50 mg/dl
- High fasting blood glucose: ≥ 100 mg/dl
- High triglycerides: ≥ 150 mg/dl

Why Do People Get Metabolic Syndrome?

The metabolic syndrome currency is related to age, unhealthy lifestyle, and genetic genes. Obesity and poor lifestyle are the most significant potential risk factors. People with low fiber, high sugar, high-fat diet and drinking habits are prone to metabolic syndrome. Also, people with hypertension, diabetes, and hyperlipidemia in their families are more likely to than ordinary people. Besides, stress causes endocrine disorders, which lead to the rise of blood sugar, which is also easy to cause metabolic syndrome for a long time.

Five Tips to Prevent Metabolic Syndrome

- Choose wisely and eat healthily: It is significant to have balanced nutrition in six categories of a healthy diet. People can use the well-eating formula of "three lows and one high" (low oil, low sugar, low salt, and high in fiber).
- Stand up and move for 30: Reduce sitting periods and move for at least 30 minutes.
- Do not smoke and drink less alcohol.
- Relieve stress and become more energetic: Relieve stress appropriately, such as by exercising, reading, listening to music, and writing a diary. Change your views on the incident, think positively, and seek help from family and friends. For example, USI's Nantou Sites employs specially qualified psychological counselors. Each employee has four free consulting services per year. If necessary, they can apply the extra consulting to the infirmary.
- Get a medical check for early detection.



升息 對金融市場的影響

作者：台新銀行 / 首席外匯策略師 陳有忠

升息是各國中央銀行的一種緊縮貨幣政策。升息會讓銀行存款與貸款等主要利率上升，尤以借錢的成本（利息）變高，會讓原本許多借錢投資的成本大幅上升，企業與個人將會減少借貸投資、更謹慎去運用槓桿，市場上這類的資金也會減少。當然，市場上資金減少、人們也會預期各種資產下跌，市場上流動的資金減少，各種投資與消費也會隨之縮減。

為何需要升息—以美國為例

起因 2020 年初起的新冠疫情導致美國經濟嚴重衰退、失業率大幅攀升，聯準會 (Fed) 不僅降息且採取無限量大撒幣以挽救垂危的經濟，使得市場上流通貨幣增加，當然也有效地刺激民間借貸、消費、投資等經濟活動，凡事物極必反，在市場資金過多下，使得萬物齊漲導致通膨加劇，逼著 Fed 得要啟動升息，來讓市場資金變少，以減緩通膨繼續蔓延。

美國升息對世界有什麼影響力？

美國一旦升息，會讓世界各國資金流進美國，以賺取較高的利差，因此會造成美元升值、他國貨幣相對貶值，這時外債較多、經濟體質不佳的國家，恐將受到嚴重衝擊。也因為美元是世界流通的最主要貨幣，各國經濟活動、商品進出口都會直接受到兌美元的匯率影響，而受到正面或負面的影響，連帶影響到全球企業的營運，和所有人的消費與投資。若他國跟進升息讓流失的熱錢回流，可抑制輸入性通膨所帶來物價上漲的威脅；若他國因經濟不佳而反向降息要刺激企業投資的話，就要犧牲該過貨幣貶值為代價。

升息對一般民眾的好處 vs 壞處

好處	壞處
- 存款利息變多，有利存款族。 - 手中外幣如美元升值，可賺到匯差。 - 通膨減緩，物價上漲速度變慢。	- 貸款利息加重，不利貸款族。 - 資金湧入銀行存款，股價、房價可能短暫走跌。 - 民眾存錢意願升高、降低消費，不利商家經濟活動。 - 借貸成本增加，企業減少投資甚至裁員，員工生計恐受影響。

升息對金融市場的影響

升息是中央銀行用來採取貨幣緊縮最主要的工具，升息就是用於市場上熱錢太多的時候，為了能有效控制通膨不再漫延的作用。升息時，央行與商業銀行各種資金拆借利率成本會上升，間接導致融資、借貸、存款等等各種利率也會上升。升息會影響的層面很廣，升息後對定存族、利變型保單有利，但對股市、債券、貸款、匯率可能有不利的影響。

金融商品	有利 / 不利	升息影響
股市	不利	企業的經營成本上升，投資人對股票要求的報酬提高因而股價預期下降。
債市	不利	債券和利率呈反向關係，利率上升、既有債券價格會跌。
匯市	美元有利	美元升息若較他國大一般會讓美元走強，非美元貨幣若升息幅度較小，會比較弱勢；匯率強弱取決於兩國相對利率的變化。
貸款	不利	銀行貸款利率揚升，讓還款壓力增加。
定存	有利	可以賺取較高的利息。
金融保險	有利	對利變型保單有利。

另外，以上所述各種資產的有利與否，談的都是名目報酬，也就是不考慮通膨貨幣購買力下降的情況。實際上，升息一般發生在通膨期間，即使是有利的資產，但在扣掉通膨所造成影響價值減損後，得到的實質報酬也可能是更差的，在目前世界各國的貨幣體制之下，長期通膨與貨幣購買力下降將是一種全球的常態，因此，在每一次升息的循環周期，未來無法避免的是一通常很大機會恐將伴隨著經濟衰退與重整步伐的來臨。

Impact of Rate Hikes On Financial Markets

Author: Taishin Bank / Manager / Tony Chen

A rate hike is a form of tightening monetary policy by central banks worldwide. A rise in interest rates will increase interest rates such as bank deposits and loans, especially the cost of borrowing money (interest), which will significantly increase the cost of borrowing money for investment. Businesses and individuals will reduce borrowing and investment, use leverage more carefully, and such funds in the market will also decrease. Of course, as the funds in the market decrease, people will also expect various assets to fall, the capital flowing in the market will decrease, and various investments and consumption will also decrease accordingly.

Why Do we Need to Raise Interest Rates—U.S. as the Example

The COVID-19 pandemic that started in early 2020 has led to a severe recession in the US economy and a sharp rise in the unemployment rate. The Federal Reserve (Fed) not only cut interest rates but also adopted an unlimited quantitative easing to save the economy, which increased the currency in the market circulation. Of course, it also effectively stimulated economic activities such as private loans, consumption, and investment. Extremes bring the opposite. With too much capital in the market, prices rose, and inflation intensified, forcing the Fed to raise interest rates to reduce market capital and slow down inflation.

What Effect Does the US Interest Rate Hike Have on the World?

Once the US raises interest rates, capital from all over the world will flow into the US to earn a higher interest rate differential, which will cause the US dollar to appreciate and other countries currencies to depreciate relatively. At this time, countries with large foreign debts and poor economic health may be severely impacted. Furthermore, because the US dollar is the most important currency in world circulation, the economic activities and commodity import and export of various countries will be directly affected by the exchange rate against the US dollar. And being affected positively or negatively will affect the operation of global enterprises and individuals consumption and investment. If other countries follow and raise interest rates to return the lost hot money, the threat of rising prices brought by imported inflation can be curbed. If other countries cut interest rates in reverse due to economic downturn to stimulate business investment, it will be at the expense of currency depreciation.

Pros vs. Cons of Rate Hikes for Individuals

Pros	Cons
• Increased deposit interest is beneficial to depositors. • The foreign currency in hand, such as the US dollar, appreciates, gaining the exchange difference. • Inflation slows, and prices rise at a slower pace.	• Loan interest increases, unfavorable to borrowers. • The influx of funds into bank deposits may lead to a short-term fall in the stock and housing market. • People's willingness to save money increases and consumption decreases, which is unfavorable for economic activities. • Borrowing costs increase, enterprises reduce investment, and even lay off employees, which may affect employees' livelihood.

Impact of Rate Hikes on Financial Markets

Raising interest rates is the most important tool used by the central bank to implement monetary tightening. Raising interest rates effectively controls inflation when there is too much hot money in the market. When interest rates are raised, the cost of loan interest rates for various funds between the central bank and commercial banks will rise, indirectly leading to an increase in various interest rates such as financing, loans, and deposits. Raising interest rates will affect a wide range of areas. It is beneficial to saving deposit families and interest-variable insurance policies, but it may adversely affect the stock market, bonds, loans, and exchange rates.

Financial Assets	Favorable/Unfavorable	Impact of Rate Hikes
Stock Market	Unfavorable	As the operating costs of enterprises rise, investors demand higher returns for stocks, so stock price expectations fall.
Bond Market	Unfavorable	Bond prices and interest rates have an inverse relationship; as interest rates rise, existing bond prices will fall.
Foreign Exchange Market	Favorable to USD	If the US raises interest rates more than other countries, it will strengthen the US dollar. If non-U.S. dollar currencies raise interest rates by a smaller amount, they will be relatively weak. The strength of the exchange rate depends on changes in the relative interest rates of the two countries.
Loans	Unfavorable	Bank loan interest rates rise, increasing the pressure on repayment.
Saving Deposits	Favorable	Higher interest.
Financial Insurance	Favorable	Favorable for interest-variable insurance policies.

In addition, the impacts on the various assets mentioned above are all about nominal remuneration. The decline in the purchasing power of inflationary currency is not considered. Interest rate hikes generally occur during periods of inflation, and even favorable assets may receive worse actual returns after deducting the impact of inflation. Under the current monetary system of various countries, long-term inflation and a decline in the purchasing power of currency will be a global norm. Therefore, in every cycle of interest rate hikes, what is inevitable in the future is that there is usually a high chance that the advent of economic recession and the pace of restructuring will accompany it.



商務會議：有用的閒聊

Business Meetings: *Effective Small Talk*

作者：英代外語國際認證機構 / 趙秀蓮 Tiffany S. Chew

你知道 50% 的商務溝通都是閒聊嗎？它能使企業凝聚；也是與他人合作時的重要元素。要讓部門間建立良好關係，其中個有組織且有效的方法就是在會議的閒聊。話題包括對方在忙什麼，遇到什麼問題，以及認為應做什麼改變。本期就讓我們來看看一些會議中常見的有用閒聊問答。

Did you know that 50% of business communication is small talk? It is the cement that holds businesses together; a vital part of working with other people. A systematic and effective way to build good relationships between people from different departments is to engage in small talk in meetings. Questions include finding out what others are doing, what problems they're having, and what they think they should be doing differently. In this issue, we'll look at some effective small talk common in meetings.

請先閱讀以下的內容：
Please read the content below first.

詢問當前負責的專案

Asking about current projects

1. What are you working on at the moment?
2. How is it going with your new team member?
3. Are you making any progress with Project A?

詢問最近發生的事

Asking about recent events

4. How did your presentation go last Tuesday?
5. How was your trip? When did you get back?

詢問消息

Asking about news

6. What's new?
7. Have you heard back from that potential client yet?
8. What have you been up to in your department?

詢問計畫和預測

Asking about plans and predictions

9. When do you think they will finally sign the contract?
10. Are you going to the trade show next week?

現在將下面最適合的回應 (A-J) 與上面的問題 (1-10) 配對。
Now match the replies (A-J) below with the questions (1-10) above.

- A. A little, but it's quite slow. We're still tied up with the designing side of things, so it doesn't feel like we're getting anywhere.
- B. Definitely! I'm giving a presentation! I'm dreadfully nervous about it actually.
- C. Ah, nothing, really. Nothing ever changes! Busy as usual.
- D. It was productive but very exhausting. I just got back yesterday, so I'm still trying to get back on top of my inbox. But I'm glad I went. I made a few potentially useful contacts.
- E. This week, hopefully, but they're still not happy with our charges, so it might still all fall through.
- F. Pretty good. He's on a steep learning curve, but he's trying hard and has a lot of potential.
- G. Awesome. We had a good turn-out, and some people said nice things about it. Whether anyone actually buys the product, as a result, is another question!
- H. We're about to start working on the new marketing plan. It's not due to be launched for another three months, but it takes a terribly long time to get ready.
- I. We've been extremely busy preparing for next week's quality inspection. We're almost ready, but there are still a few big jobs to finish.
- J. Yes, they emailed us this morning with an order for 100,000 units, so it looks like it's all going ahead. Absolutely exciting.

Answers

1	2	3	4	5
H	F	A	G	D
6	7	8	9	10
C	J	I	E	B

閒聊往往很短暫。因此，下次開會時不要羞於閒聊。此外，如果認真想建立更好的關係並讓會議更高效，閒聊可產生令人驚喜的效果，也是你練習英語的好機會！

Small talk is small in the sense that the conversations tend to be quite short. Therefore, don't be shy to strike up a small talk the next time you're in a meeting. Further, if you're serious about building better relationships and having more effective meetings, it can yield surprising results. It's also a good opportunity for you to practice your English!

伴隨毫米波而來的 S 參數量測挑戰

作者：台灣南崗廠 / AMMS / MWC / 研發暨產品行銷中心 / 研發二處 / 硬體研發五部 / 陳怡伶

雖然高頻毫米波訊號的產生、傳輸與應用並非全新技術，但受益於 5G 的興起與商業化需求，將這些技術推進到更成熟與普及的階段，隨之而來的，則是更多的挑戰。本文將著重介紹在量測方面，尤其是 S 參數量測時，所面臨到的困難挑戰，以及其因應之道。

毫米波信號於傳輸路徑的效應

頻率越高，在同一個路徑中消耗的能量越高，也越容易產生寄生電容效應，因此在邁入毫米波領域後，以往常用的量測方式不得不面臨變革，原本可忽略不計的微量阻抗，在毫米波領域中，會攀升到不容忽視的高度，在此前提下，原本利用焊接銅管方式量測已不再可行，為了減少量測路徑造成的誤差，非得改成以精密 RF 探針直接點測路徑的方式，並輔以校正將參考面往後推到針尖，才能獲得足以信賴的量測成果。

校正方式之比較與選擇

需要準確量測並去嵌入 (de-embedding) 待測物以外路徑時，除採用 RF 探針，還需將參考面推到 RF 探針針尖或更後方的技術，這時就要用校正來處理參考面位置。

常見校正方式有 SOLT、SOLR、TRL、LRM 等，另只限於使用 Formfactor WinCal 軟體狀況下，還有一種校正方式為 LRRM，以下做簡單介紹與比較。

SOLT (Short-Open-Load-Thru) 如其命名所示，以三個已知特性的標準件 (Short/Open/Load) 校正，另外針對雙埠間的特性，則以 Thru 標準件來校正。此為最常用校正方法，且市面上的網路分析儀都具備此校正演算，RF 探針廠商也多附有標準校正片做為其探針之校正工具。值得注意的是，根據 Formfactor 公司所述，SOLT 校正法的適用頻率為 40GHz 以下。另外，如只需單埠探針量測時，可只用 Short/Open/Load 校正，此法稱為 SOL 校正。

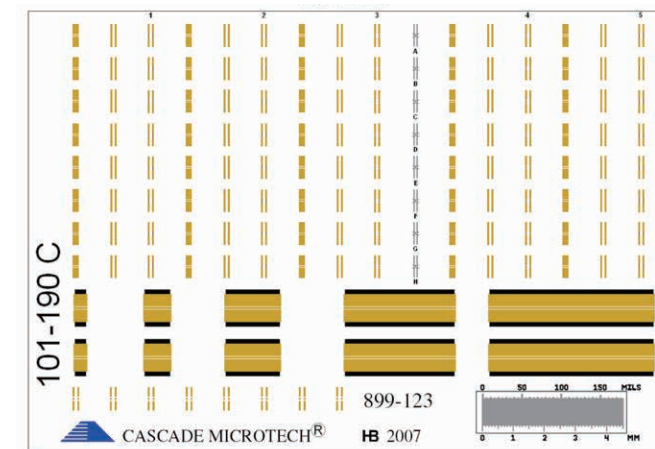


圖 1. Formfactor 公司生產之標準校正片 (P/N: 101-190)，上有 40 組 Short/Thru/Load 標準件，8 個 Open on substrate 標準件，以及 5 組不同長度的傳輸線

SOLR (Short-Open-Load-Reciprocal) 校正由 SOLT 演化而來，移除已知數值的 Thru 標準件，改以具有互易性 ($S_{21} = S_{12}$) 的 Unknown Thru 取代，藉由演算方式的修正，可移除 Thru 標準件必須為直線且特性須為已知的限制，適用於雙埠之間量測呈 90 度而非直線面對面的狀態，或是雙面量測沒有已知特性的 Thru 標準件可用時的狀況。

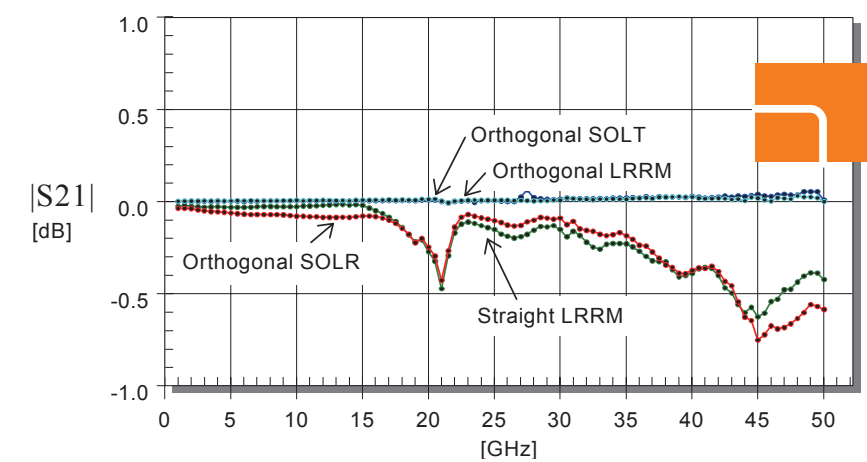


圖 2. 用不同校正方法量測彎角 Thru (形狀同右上方橘色線條) 所得之 S21。採用直線 Thru 的 LRRM 校正，量測此彎角傳輸線時，在 21GHz 左右有一個明顯的 dip，此為傳輸線彎角所造成的效應。但採用彎角 Thru 校正的 SOLR/SOLT/LRRM 校正中，只有 SOLR 校正後可量出類似的結果，其他兩者則無法量出此 dip (因其演算法將此偏差歸零)。由此可知，若需用彎角 Thru 做校正時，SOLR 方法會優於 SOLT 或 LRRM。

TRL (Thru-Reflect-Line) 校正使用與 SOLT 不同的演算法，藉由量測兩段不同但已知長度的傳輸線與一個反射標準件，即可完成校正，優點也是缺點的部分是控制傳輸線長度即可對應不同校正頻段，適合窄頻的使用模式，若需要寬頻的校正則需準備多段不同長度的傳輸線作為校正標準。NIST Multi-Line(LRL) 校正法目前被視為最準確的校正標準。相對於 SOLT，對標準件的定義準確度要求較低。

LRM (Line-Reflect-Match) 校正由 TRL 衍伸而來，藉由將 50 Ohm 阻抗 Load/Match 當作無限長的傳輸線，解決 TRL 低頻校正需要較長傳輸線的困難，可實現寬頻校正的目標。因可沿用 SOLT 標準校正片，若只需校正到針尖時，實屬優良校正方法。

LRRM (Line-Reflect-Reflect-Match) 校正為 LRM 改良版，目前只有 Formfactor WinCal 軟體支援此校正運算法，此校正法需量測兩個不同的反射標準件 (即 Open 與 Short)，根據 Formfactor 公司的驗證，此校正之準確性非常接近 NIST LRL 校正法。

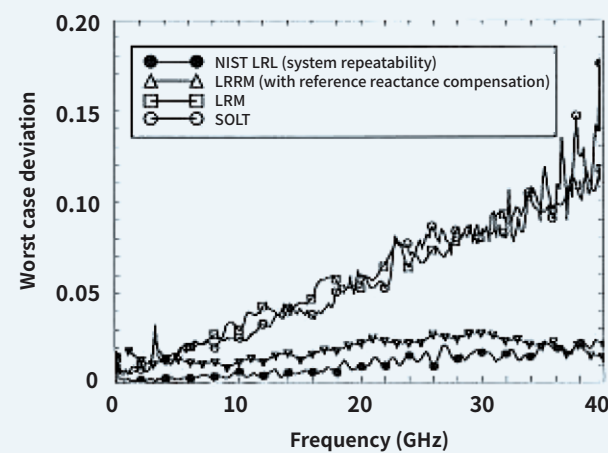


圖 3. 比較不同校正法量測誤差與 NIST LRL 的差異後，LRRM 為最接近的校正法。至於 SOLT 與 LRM 校正法，量測誤差則會隨頻率升高，與 NIST LRL 差異也逐漸增加，尤其 SOLT 在超過 30GHz 後，差異更急速增加。
* 來源：A guide to Successful on Wafer Millimeter Wave RF characterization, Gavin Fisher, Cascade Microtech

在 S 參數校正過程中，額外加入訊號強度校正之必要性

在完成 S 參數校正 (使用 LRRM) 之後，定時量測開路狀態下的針尖 Return Loss 來確認校正的重複性，在圖 4 中，可看到隨著時間拉長，訊號變化越來越大，在一小時後即達到容忍值 ($\pm 0.1\text{dB}$) 的邊緣，20 小時後，則是大幅超出限制，此現象在頻率超過 20GHz 後開始出現，越高頻則越顯著。

失去校正後的重複性，意謂著須要重新校正才能量測到正確的數值。以這裡的例子來說，若量測訊號為 60GHz 以下，則校正 4 小時後仍可使用此校正檔，但 20 小時後即不適用；但若量測訊號頻率上升到 100GHz，則僅僅在校正 10 分鐘後即須重新校正。越短的重新校正時間，代表可以進行量測的時間與樣品越少，除了需要消耗額外的人力時間重新校正以外，因一般標準校正片為消耗品，可用次數與時間是有限的，所以重新校正次數增加也表示要消耗更多的標準校正片，整體而言，時間、人力、物力的損耗都會大幅增加。

After S-parameters Calibration

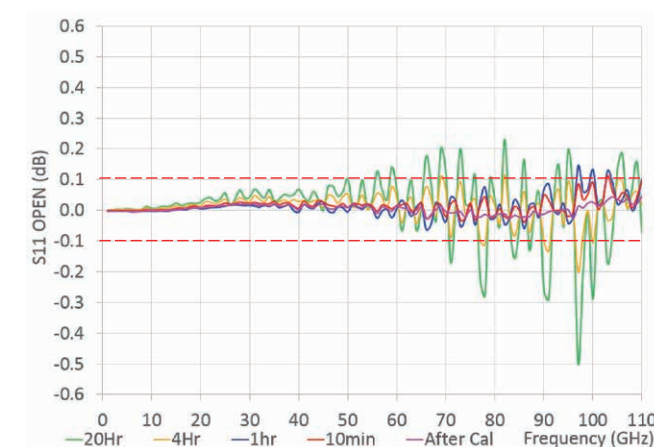


圖 4. 校正後不同時間量測所得之開路狀態下針尖的 S11

但如在 S 參數校正中加入訊號強度校正，在圖 5 可見整體變化趨緩，變得相對穩定 (重複性高)，且在 20 小時後仍可在 0 – 100GHz 間維持高穩定度。

After S-parameters + Power Calibration

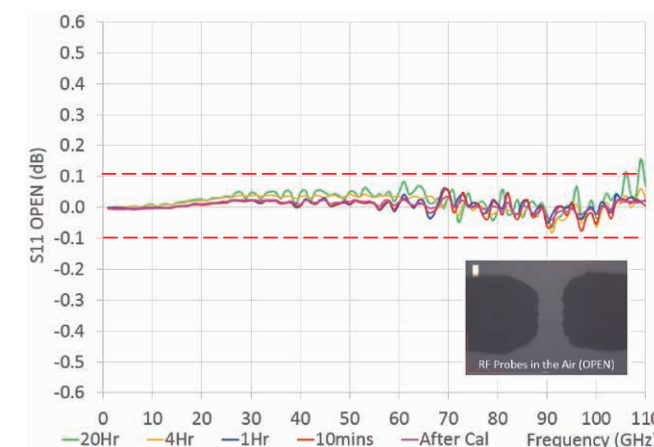


圖 5. 加上訊號強度校正後，不同時間量測所得之開路狀態下針尖的 S11

* 來源：Improving Probe-Tip S-parameters Measurements with Power alibrations, Choon Beng Sia, Formfactor Inc.

在以上介紹的眾多校正方式之中，如何選擇適合的校正方法端看量測的需求。例如：若需要將參考面定義到晶片或基板中的某段路徑後，則適合用 TRL 方法製作可供去嵌入 (de-embedding) 之校正路徑，但須視頻段需求計算適合的 Line 長度；若只需校正到針尖、且持有 Formfactor WinCal 軟體時，LRRM 則為較優良的選擇；反之，若沒有 WinCal 軟體時，則推薦 LRM 校正；若有量測到 100GHz 的需求，則需加入訊號強度校正……等等，各種校正方式擁有各自的優缺點，如何根據自己的量測需求而選擇，可謂為毫米波 S 參數量測的第一道關卡。

Challenges of the *S Parameter Measurement* Coming With mmWave

Author: Taiwan Site / AMMS / MWC / RD & PM Center / Research & Development Division II /
Hardware Research & Development Dept. V / Elaine Chen

Generation, transmission and application of the high-frequency mmWave is not a brand-new technology, but this technology was driven to a more mature and popular stage with the benefit from emergence and demand for commercialization of 5G. However, it brings more and more challenges. In this text, we will mainly talk about the measurement, especially the difficulties and challenges you are facing with when measuring S parameter as well as their solutions.

Effects on Transmission Path from the mmWave Signal

With the increase of signal frequency, both energy consumption and parasitic capacitance effect in a certain path would increase significantly as well. Therefore, change in commonly used measurement methods is a must when entering the mmWave field. A negligible tiny resistance in the past would reach to a certain level which cannot be ignored anymore in mmWave. Therefore, measurement by the use of welded copper tubes is no longer feasible. In order to reduce the error resulting from measurement paths, it is necessary to adopt a more accurate measurement method by applying an RF probe with aid of calibration for pushing the reference plane forward to the tip. In this manner, reliable measurement results are attainable.

Comparison and Selection of Calibration Methods

When measuring a path accurately and de-embedding the path before DUT(Device Under Test) are needed, in addition to the RF probe, a technique to push the reference plane to the probe tip or even further is also required. This is why we need calibration to handle the reference plane position.

SOLT, SOLR, TRL and LRM etc are all common calibration methods. However, one more method called LRRM is applicable when Formfactor WinCal software is available. Below is a simple introduction and comparison.

SOLT (Short-Open-Load-Thru), as its name, is a calibration method done by three standards with known characteristics (Short/Open/Load) for each port as well as a Thru standard for the calibration between two ports. It is the most common calibration method and is available in all commercial network analyzers. Generally, an ISS (Impedance Standard Substrate) should be provided by the RF probe vendors as a tool for probe calibration. It is worthy to note that, according to Formfactor, SOLT calibration method is only applicable when the operating frequency is below 40GHz. In case of one-port probe measurement, it is allowed to use Short/Open/Load only for calibration. This method is called SOL calibration.

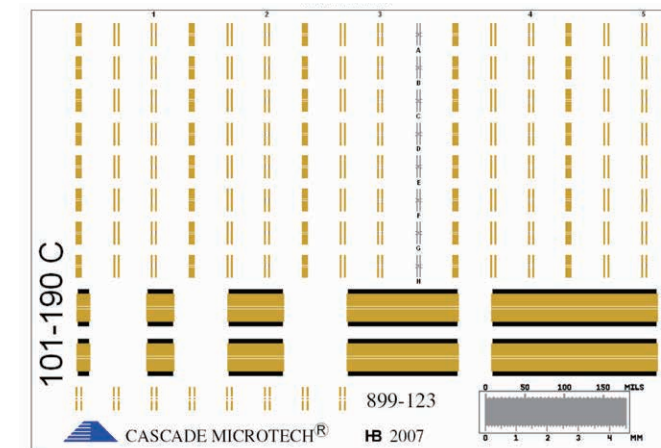


Figure 1. The ISS (P/N: 101-190) manufactured by Formfactor. There are 40 sets of Short/Thru/Load standards, 8 sets of Open-on-substrate standards and 5 sets of transmission lines with different lengths.

SOLR (Short-Open-Load-Reciprocal) calibration evolved from SOLT. It replaces the Known Thru standard with a reciprocal Unknown Thru ($S_{21} = S_{12}$). Revisions to the algorithm can remove the restrictions that the Thru standard must be a straight line and its characteristics must be known. It suits the situations when the measurement angle between two ports is orthogonal instead of parallel, or when a Thru standard with known characteristics is not available in double-side measurement.

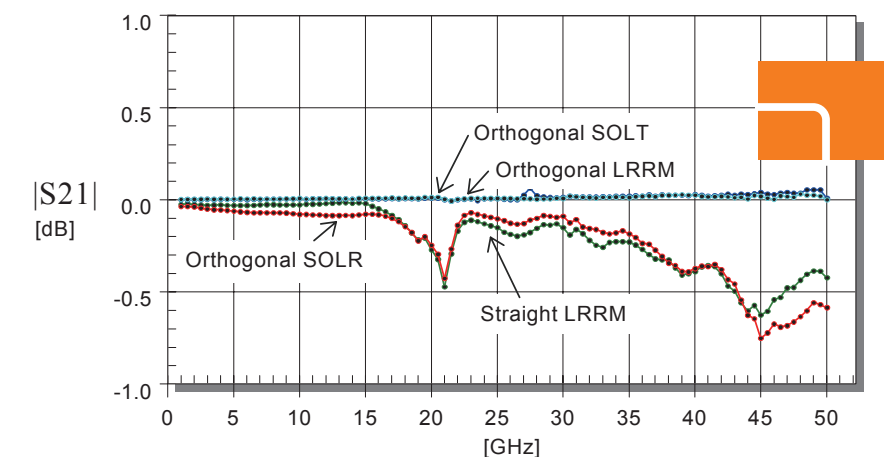


Figure 2. S21 was collected by measurement of an orthogonal Thru, whose shape is the same as the orange line in the upper right corner of the figure, with different calibration methods. When a straight Thru is adopted for LRRM calibration and then measure this orthogonal transmission line, there is an obvious dip at 21GHz caused by the bending angle of the transmission line. However, when adopting the orthogonal Thru for the SOLR/SOLT/LRRM calibrations, similar results are only found with SOLR calibration. No such dip is found with the other two calibrations since their algorithms reset the deviation. Therefore, SOLR is superior to SOLT or LRRM when using the orthogonal Thru for calibration.

The algorithm used by TRL (Thru-Reflect-Line) calibration is different from SOLT. The calibration is completed by measuring two transmission lines with known but different lengths and a reflective standard. Different frequency band calibration can be accessed by controlling the length of the transmission lines which is a merit but also a demerit for it, because the calibration can only work in a narrow frequency band. If a broadband calibration is necessary, then multiple transmission lines with different lengths are required as calibration standards. For present, NIST Multi-Line (LRL) calibration is considered the most accurate calibration standard. Compared with SOLT, its accuracy requirement for standard characterization is lower.

The LRM (Line-Reflect-Match) calibration uses TRL-like mathematics. The 50 Ohm resistance Load/Match acts as an infinitely long transmission line and thus provides the solution to fulfill the need of longer transmission lines for low frequency calibration in TRL. This allows the realization of broadband calibration. SOLT calibration standards can be used in this case, so it is an excellent calibration method when only probe tip calibration is needed.

LRRM (Line-Reflect-Reflect-Match) calibration is the improved version of LRM. For present, only Formfactor WinCal software supports this calibration algorithm. This calibration method requires two different reflective standards (Open and Short). According to the verification by Formfactor, the accuracy of this calibration is very close to NIST LRL calibration.

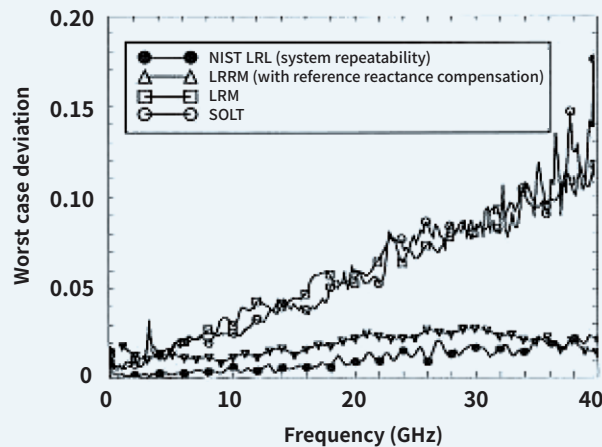


Figure 3. LRRM is the most accurate calibration method, other than LRL itself, after comparing the measurement deviation between different calibration methods and NIST LRL. As for SOLT and LRM calibration methods, their measurement deviation will increase with frequency. In particular, SOLT shows even more deviation when frequency goes beyond 30GHz.

*Reference: *A guide to Successful on Wafer Millimeter Wave RF characterization*, Gavin Fisher, Cascade Microtech

Necessity for Additional Signal Intensity Calibration during S Parameter Calibration

After LRRM calibration, repeatability can be confirmed by measuring the return loss of probe tip in the air, which is regarded as the open standard in Formfactor calibration. In figure 4, deviation increases as timespan is extended. The limit of tolerance ($\pm 0.1\text{dB}$) is reached after only one hour, and it is greatly exceeded after 20 hours. Such phenomenon starts to appear when the frequency is over 20GHz and becomes more prominent as frequency gets higher.

Repeatability failure after calibration means re-calibration is required for accurate measurement. For example, if a measured signal is below 60GHz, then the calibration is still creditable in 4 hours after calibration but not applicable after 20 hours. However, once the measured signal frequency rises to 100GHz, re-calibration could be needed in 10 minutes shortly after calibration. The shorter the re-calibration timespan is, the less measurement could be done and fewer samples could be tested. In addition to extra manpower and time consumption for re-calibration, ISS is also a consumable material with limited service life. That is to say, the more re-calibration we do, the more ISS would be consumed. As a result, consumption of time, manpower and material resources will greatly increase.

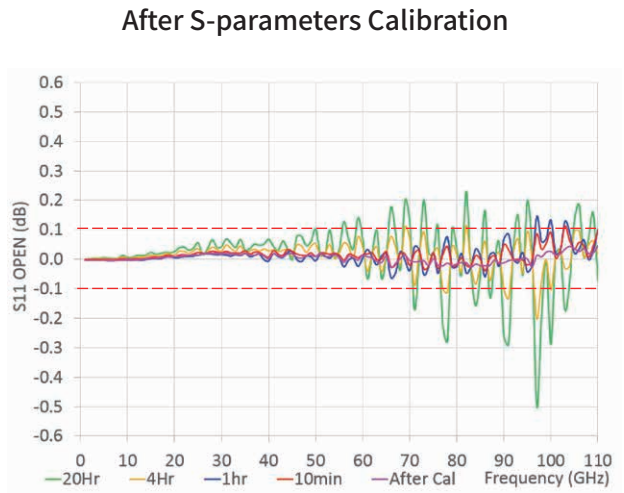


Figure 4. S11 of probe tip in the air at different timing after calibration

However, if the power calibration is included in the S parameter calibration, then the deviation becomes moderate and the return loss is more stable, or highly repeatable, in general as shown in the figure 5. High stability can still be maintained within 0 to 100GHz after 20 hours.

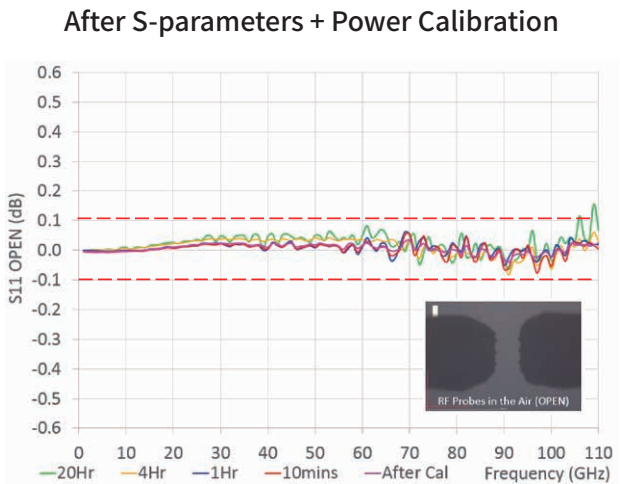


Figure 5. S11 of probe tip in the air at different timing with power calibration included

*Reference: *Improving Probe-Tip S-parameters Measurements with Power Calibrations*, Choon Beng Sia, Formfactor Inc.

Among those various calibration methods introduced above, how to choose an appropriate calibration method depends on measurement requirements. For example, if it is necessary to define a reference plane in the certain path on a chip or substrate, then TRL is applicable to generate the proper path S-parameter for de-embedding with appropriate line lengths determined by the frequency requirement. If only calibration to the probe tip is needed and Formfactor WinCal software is available, then LRRM is a better choice. On the other hand, LRM calibration is recommended when WinCal software is not at hand. If there is a demand for measurement at 100GHz, then the power calibration has to be applied. Each calibration method has its own advantages and disadvantages. How to make a choice among them to fulfill your own requirement is the first challenge of the S parameter measurement for mmWaves.

飛旭電子 新聞集錦

Asteelflash News

作者 Author : Asteelflash Suzhou Site / Mia Wang
Asteelflash Normandie Site / Loïc Denis

數字運營中心與全球財務共用中心的成立 The Establishment of The Digital Operation Center and The Global Shared Service Center



歲末年終，飛旭蘇州廠已經度過和疫情相伴的第三年。在這過程中，我們學會了從容不迫，坦然面對與困難的一場場較量。第四季度，飛旭蘇州廠迎難而上，成立了數字運營中心及全球財務共用中心 (SSC)。

隨著數位運營中心的成立，通過借助數據化的管理平台、技術對公司生產運營過程中提供專業、準確的數據分析方案，以幫助公司在系統智慧化、產品質量和成本節約等方面提高效率。自目前，戰情室陸續完成了內部裝修及員工搬遷。至今已有約 20 名分別來自 IE、LEAN、ME、DFX 等工程團隊的員工入駐。

全球財務共用中心於 2022 年 Q4 正式在蘇州廠成立。該中心主要通過整合 USI 各個廠區財務工作實現財務流程標準化及高效化的集中管理。目前提供的服務範圍涵蓋美洲及亞洲區，以應收、應付（費用）及總帳服務模組為主。我們的目標是為 USI 各個廠區財務部門通過提供及時準確的財務資料，做出精準的財務決策，並在集中化管理及財務流程標準化過程中主動注入持續改進的思維，達到規模效應下的降本增效，財務管理效率的提高，從而更好的支持到集團全球化的發展戰略，成為 USI 財務團隊中促進集團利潤增長和運營執行的中堅力量。

新歲序開，初心不改！相信在新的一年里，他們必將以新的面貌，承載新的使命與公司攜手並進，共創輝煌！

At the end of the year, Asteelflash Suzhou Site has gone through its third year with the pandemic. In the process, we learned to be calm and composed to face the challenges. In Q4, Suzhou Site overcame challenges and established a Digital Operation Center and a Global Shared Service Center (SSC).

The establishment of the Digital Operation Center can help the company improve efficiency in terms of system intelligence, product quality, and cost savings by using data-based platforms and technologies to provide professional and accurate data analysis solutions in the company's production and operation process. So far, the interior decoration and staff relocation of the Digital Operation Center have been completed. About 20 employees from engineering teams such as IE, LEAN, ME, and DFX have moved in.

The Global Shared Service Center was officially established in Suzhou Site in Q4 of 2022. The center mainly achieves standardized and efficient centralized management of financial processes by integrating the financial work of USI's various sites. The services currently provided cover the Americas and Asia, focusing on receivables, payables (expenses), and general ledger service modules. Our goal is to make accurate financial decisions by providing timely and accurate financial information for the financial departments of USI's sites. In the process of centralized management and financial process standardization, we actively inject continuous improvement thinking to achieve cost reduction and efficiency increase under the scale effect and improve financial management efficiency to better support the group's global development strategy. It becomes the backbone of USI's financial team to promote the group's profit growth and operational execution.

The ultimate purpose will not change! In the new year, they will go hand in hand with the company with a new look and mission to create brilliance together!

雙向互助日活動 DuoDay



在歐洲殘疾人士就業週和全國雙向互助日之際，我們很榮幸歡迎來自 Les Ateliers Du Cailly 身心障礙工作機構的 Emmanuel Desmaret 先生與 Carole Leroy 女士拜訪 Asteelflash Normandie 廠，Emmanuel 是一名殘障人士，而 Carole 是一名教育者。

在這次活動中，我們準備了 4 個攤位來提高員工對於這方面的認識。分別是由 Emmanuel 和 Carole 指導的基本手語學習、問答挑戰、讀唇語遊戲和關於聽力障礙量表的討論會。

這一天提供了一個機會來改變我們看待事物的方式以及減少我們的偏見。非常感謝 Emmanuel 與 Carole 的指導，以及 Les Ateliers Du Cailly 身心障礙工作機構的支持，我們也感謝 Normandie 廠同仁們的參與。

During the European Week for the Employment of People with Disabilities and the National DuoDay, we proudly welcomed Mr. Emmanuel Desmaret and Miss Carole Leroy from L'ESAT "Les Ateliers du Cailly" and to visit the Asteelflash Normandie Site. Emmanuel is a person with a disability, and Carole is an educator.

In the event, we organized 4 stands to raise awareness among the employees. We had basic sign language learning which was taught by Emmanuel and Carole, a Q&A challenge, a lip-reading activity and a discussion about hearing impairment scale.

This day was an opportunity to change our way of looking at things and eliminate our prejudices. Many thanks to Emmanuel and Carole for their guidance, to Les Ateliers Du Cailly for the support, and to our colleagues at Normandie Site.

法國飛旭集團 Hamburg 廠總經理

Albert Bückers

任何事總會有辦法

採訪編輯：總經理室 / 行銷企劃部



Asteelflash 漢堡廠是一個小而精悍的團隊，從生產、研發、業務專案，他們無一不包，支援多個國際客戶。本次我們邀請漢堡廠總經理 Albert Bückers 接受採訪，談談他的經驗與管理哲學。

Q1. 請簡單介紹一下你自己。

我於 1984 年畢業，隨後就加入西門子，擔任電信終端領域的硬體工程師。第一年，我和慕尼黑的一個小團隊一起將 BTX 終端的開發和生產轉移到位於博爾霍特的生產基地，我主要負責 AC-DC 電源和與 PSTN（公用交換電話網路）的通訊模組。之後，我負責全球電信公司的硬體開發工作，包含了所有電氣和聲學設備的設置和測量。隨著進入數位增強無線通訊領域，我轉而負責專案管理，並與兩位來自銷售和行銷的同事一起接管了所有無線設備的專案。



2009 年，我轉職到 EN ElektronikNetwork (即現在的 Asteelflash 漢堡廠) 擔任開發主管。2017 年接手了漢堡廠的總體管理。目前，我擔任 Asteelflash 漢堡廠的總經理，此外我還負責支援 Asteelflash EEMEA 的銷售工作，並為全球各個國際客戶的生產專案提供支援。我們的支援涵蓋了從資訊需求提出到啟動生產的所有內容，據此我們與各廠區的團隊成員緊密合作。

Q2. 你曾在西門子這樣的大公司工作過。請問你認為大公司和小公司之間有什麼主要差別？

首先，我相信 Asteelflash 不是一家小公司。但當然，組織架構顯然很不一樣。在西門子，你會順著公司大局走。這意味著你的發展被局限在一個狹窄的框架內。那時候，即便我是很有創造力的，但還是要依照「上層」的策略指示做。在 Asteelflash，組織層級非常扁平，幾乎每個人，包括生產員工，都有容易有機會貢獻創意。這也使得團隊在工作上更加容易，每個成員都常需負擔不同程度的責任。

Q3. 當你擔任不同角色時，哪些專業能力對你而言是重要的？

有很多！讓我們以漢堡當地的角度來講。首先，擁有良好的技術理解是必要的，這可使新的開發專案順利發展和無風險地導入生產。同時，在準備過程中，你必須能夠以開發者的程度去討論方法和解決方案，來支援開發或由自己的團隊執行開發。所以，你需要對既定或特定產品的新製程有良好的技術理解。

以業務角度來看，一方面，在提供客戶技術建議時，上述的必備知識很重要，要能為客戶提供技術建議。另一方面，絕對有必要與「關鍵人物」建立關係，以便能夠開誠佈公地與客戶聯繫。不這樣的話，很難獲得新的訂單，特別是新客戶的訂單。再不然只能透過價格戰了。



Q4. 從工程師到業務人員，對你而言最大的心態變化是什麼？

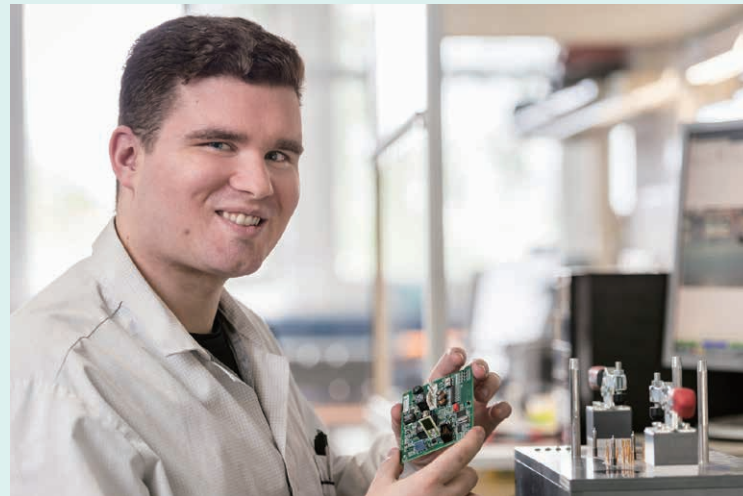
這條路並沒那麼難。作為一名開發者，你必須與內外部的客戶談論他們的需求。在這裡，我學會了與客戶（不同的電信公司或世界各地的客戶）建立關係。從初出茅廬到今日，我認為我最大的進步是商業方面技巧的建立。我從許多發展新產品的客戶看到，那些產品常常經歷過於昂貴（設計過頭）的開發，卻不能以最佳方式進入生產製程，他們一股腦投入開發，而沒有考慮到品質與功能要如何去部署。

Q5. 你的領導風格是否隨著時間而改變？

我想是的。一般而言，我所獲得的經驗是，無論身處哪個團隊，攜手合作都能產出最好的結果。當然，身為主管下達指令是必要的。但是當團隊意識到問題並嘗試獨立解決時，跳出來主持討論會議最能提供團隊動力。

當然，在全球企業體系下，也意味著有些指示，對當地團隊而言可能不太清楚它的背景。在一個團隊中，並不是所有的決策都對所有地點、部門和員工同樣有利。但如果團隊瞭解這個指示後面的背景是什麼，也可以更有效地開展工作。

順便說一下，這也適用於業務活動。如果你直截了當地把你的知識強加給客戶，特別是那些還在研發階段的新創企業，客戶將會有所防備。



Q6. 你如何指導年輕人？

- 給予他們能夠承擔的責任！
- 允許犯錯。可以從錯誤中學習！可以而且必須犯錯，但只能犯一次（最多兩次）
- 相信同事，但要監督他們，引導他們方向
- 隨時準備回答問題

Q7. 你以前非常看重哪些事情，但現在覺得不重要了？

這好難回答！剛開始的時候是錢。剛畢業時收入很少。因此，賺錢是實現你人生規劃的途徑。而工作是達到賺錢目的的手段。在這段時間裡，我的經濟收入讓我的人生規劃（我已經 61 歲了）幾乎都實現了，我現在想帶著喜悅和動力去工作。

Q8. 你的座右銘是什麼？

德文有一句「Geht nicht, gibt's nicht」（總會有辦法）。這句格言來自我還在當工程師的時代，不過到今日仍然受用。你有聽到多少次「這行不通」或「這不可行」？許多議題被這些句子所否定，因為大家不知道如何往前或不敢往前。但這句格言是真的，在大多數情況下是有解決方案的，即使方法太昂貴或不合時宜，但這些方法正是達成目標的開始。

Albert Bückers

General Manager of Asteelflash Hamburg

Does Not Work, Does Not Exist

Interviewed by: President Office / Marketing Communication

Fsteelflash Hamburg Site is a small but powerful team, from production, Research & Development to business projects, they support many international customers. This time, we invited Albert Bückers, the General Manager of Asteelflash Hamburg, to talk about his experience and management philosophy.



Q1. Please briefly introduce yourself.

I graduated in 1984 and immediately joined Siemens as a hardware developer in the field of telecommunication terminals. In the first year, I was with a small team in Munich to transfer the development and production of BTX Terminals to production site in Bocholt. I focused on the AC-DC power supply and the communication module to the PSTN (Public Switched Telephone Network). After that, I was responsible for the hardware development for telecom companies worldwide. This includes all electrical and acoustical settings and measurements. With the entry into DECT telephony, I switched to project management and took over the project for all wireless devices together with two colleagues from sales and marketing.

In 2009, I transferred to EN ElektronikNetwork (now is Asteelflash Design Solutions Hamburg), as Head of Development. In 2017, I took over the general management of the Hamburg site. Currently, I am the General Manager at Asteelflash Design Solutions Hamburg. In addition to managing the Hamburg site, I supported Asteelflash EEMEA in sales and support various international customers with production projects. Our support covers everything from information request to production start-up, whereby we work closely with team members at each site.

Q2. You have worked for a corporation like Siemens. What's major difference between a corporation and a smaller one?

First of all, I believe that Asteelflash is not really a small company. But of course, the structure is clearly different. In a corporation like Siemens, you swim along on a wave. This means that your own development is given only within a narrow framework. At that time, I was able to work very creatively, but always under the strategic guidelines from "above". At Asteelflash, the structure and hierarchy is very flat and almost everyone, including employees in production, has the opportunity to contribute easily creative ideas. These structures also make it much easier to work in a team, as the teams often have different levels of responsibility.

Q3. What professional capabilities are important to you when you are in different role?

Various skills are necessary! Let's start locally for Hamburg: First, a good technical understanding is necessary to introduce new development projects well developed and risk-free into production. Also in the run-up, you have to be able to discuss approaches and solutions on a developer level to support the development or to offer and execute the development with your own team. Thus, you need a very good



technical understanding of established or product-specific new manufacturing processes.

For the sales aspect, on the one hand, the above-mentioned knowledge is necessary to be able to give technical advice to the customer. On the other hand, it is absolutely necessary to build up personal relationships to the "key persons" to be able to approach the customers openly and honestly. Without this, it will be difficult to get new orders, especially from new customers. Otherwise, the only way is through prices.

Q4. From an engineer to salespeople, what does the major mindset change for you?

The path was not that difficult. As a developer, you have to talk openly with customers, internally or externally, about their requirements. Here I learned to build relationships with customers (various telecom companies or customers worldwide). The biggest leap from being a developer to today's skill set is the commercial aspects. I see it with many customers with new products. These products are often developed too expensively (over engineered) and do not fit optimally into the production processes. Their development is straightforward without considering Quality and Function Deployment methods.

Q5. Did your leadership style change over time?

I think so. In general, I have made the experience that working together in partnership—regardless of the team—produces the best results. Of course, it is necessary to give directives. But when the team recognizes problems and tries to solve them independently, moderating the discussions is the most motivating way.

Of course, integration into global corporate structures also means that instructions are given whose backgrounds are not apparent to the local teams. Not all decisions in a group are equally advantageous for all individual locations, departments and employees. But here too, if the team understands the background, it can work on it more effectively.

By the way, this also applies to sales activities. If you bluntly impose your knowledge on the customer, especially in the case of startups that are still mainly involved in research and development, the customer will go on the defensive.

Q6. How do you mentor young people?

- Give colleagues responsibility that they can bear!
- Allow mistakes. You can learn from mistakes! You can and must make mistakes, but only once (max.: Twice)



- Trust colleagues but monitor them and guide the paths for them.
- Be available for questions

Q7. What things did you used to value greatly, but now feel unimportant?

This is very difficult to answer! In the beginning, there was money. After graduation, you had very little. Therefore, money was the way to achieve your life plan. Work was the means to an end. In the meantime, the life plan (I am 61 years old) has almost been achieved, and the financial income secures it. Now I want to go to work with joy and motivation.

Q8. What is your motto for life so far?

In German "Geht nicht, gibt's nicht" ("Does not work, does not exist"). This motto comes from my time as a developer and is still valid today. How often do you hear "that won't work" or "that will never work"? Many topics are dismissed with these phrases because people don't know how to proceed or are afraid to. But it's true, in most cases there are solutions, even if they are too expensive or don't fit into the schedule. These solutions are the beginning to reach the goal.

創新是什麼？

熊彼得提出創新是「創造性的破壞」，要靠創造力走出不一樣的路，並破壞對手的競爭優勢。

究竟創新會破壞什麼？像是淘汰原產品型號，包括自己或別人的產品，有時候為了怕別人破壞自己的市場，我們自己會先破壞市場，免得市場被別人端走。許教授舉例，iPhone 14 上市替代了 iPhone 13，蘋果的產品一直推陳出新，藉由新的產品去替代原先的產品，避免市場被搶走，改變市佔率。

延續前面討論，許教授也提到《創新的兩難》一書的作者 Clayton Christensen，他刻意選了一個不同的英文字「Disruptive Innovation」一以代表一種特殊的創新型式，一種特殊破壞市場的方式一來詮釋創造性的破壞，許教授將其翻譯成「低破式創新」，他特別提到，任何創新都必然造成原先舊有產品市場破壞。

創新發生在技術供給以及市場需求

創新是將某個技術供給應用到某個市場需求，分成兩個類別：

技術推動的創新

基於技術資源進入新市場，以及技術可以應用的市場需求，許教授特別說到，我們可以盤點公司現在有哪些技術，可應用在哪些產品上。例如：不織布的技術可以應用在口罩製作、無塵室濾網、保溫隔熱墊等等，但還可以應用在哪些產品上面，這是管理者需要思考的，公司花了很多力氣與時間在技術開發，但開發出來的技術用在哪裡，這件事情需要從顧客、銷售、異業的需求來發現，這個部分很重要，但常常會被忽略。

需求拉動的創新

基於市場需求引入新技術，先看見市場的需求，再找出解決方案。許教授舉例：遊戲機的跨界應用—「銀髮族的遊戲機」。為什麼沒有人幫老人開發電子遊戲，讓他們健身與消磨時間？若是利用現有的技術、盤點現有的產品，調查老人的市場，將現有的技術或專利調整一下就可應用在這個市場。

創新是既有元素的重新組合

以產品為例：Motor + Bicycle = Motorcycle

哈雷機車利用當時已有的馬達的技術加上腳踏車，重新組合出來。從 0 到 1 非常不容易，但 0 並非完全憑空創造，而是從現有的技術資源中去找機會。後續產品會不斷演進，但整體大架構並不會改變。

1923 年 BMW 進入摩托車市場，它必須要有一些不同的技術，才會在市場上有競爭機會，因此利用自己最核心的技術「轉軸式傳動」進入摩托車的市場。

許教授特別提到供給面（技術知識）創新分類：

漸進式創新

基於既有的知識基礎（專利、專家、專用設備），例如：哈雷機車本身就是在摩托車的技術領域中有優勢，再利用既有的技術知識不斷演進產品。

激進式創新

基於新興的知識基礎，例如：對於當時 BMW 進入到機車的市場，它是一個新進者，必須要有不同的知識基礎，才会有競爭的優勢，因此 BMW 利用轉軸式傳動的技術，進入到摩托車的市場，讓自己和大廠站在相同的起跑線。

到底要持續發展舊技術？還是要跟其他公司一樣開發新技術？效能要如何評估？這會讓很多公司面臨兩難。

誰有創新的兩難

新進入的創新者沒有，因為本來就沒有既有客戶群，找到的都是新客戶，站穩腳跟後就準備跨入主流市場。



舊有的大廠會有兩難，他們必須要針對老顧客持續創新，像 BMW 4 轎車，提供舊換新優惠來穩固老顧客。低破式創新針對新顧客，例如：BMW IX 純電休旅車，專攻電動車新市場。

創新可以從兩個角度切入：資源與市場，企業可以透過資源改變尋找新市場，或是從市場尋找新技術。

在演講的尾聲，許教授做了總結，我們應該以各類型的創新來改變技術、市場，以及產業的競爭動態，才能建立企業持續的優勢。

Build Sustainable Advantage with *Total Innovation Management*

Author: Taiwan Tsautuen Site / ADM / Corporate Service / Sandy Tong

Lecturer: Chengchi University / TIIPM / Professor Mu-Yen Hsu



What is Innovation?

The concept of innovation was first proposed by Schumpeter in the early 20th century. Schumpeter proposed that "the competition between capitalists to provide better products to customers is good for society," which is a metabolism mechanism. A capitalist who wins over his opponent through such a mechanism is called an "Entrepreneur," an important person who can create, support and maintain a business. Entrepreneurs must face various economic environment changes and innovate to keep their businesses running. Therefore, Schumpeter said that "entrepreneurs" are constantly making innovations so that resources can be reused.

Schumpeter pointed out that innovation is "creative disruption," which requires creativity to find a different path and destroy the competitive advantage of competitors.



What exactly does innovation disrupt? Like weeding out the original product models, including our or other people's products. Sometimes, to avoid that others will disrupt our market, we will disrupt the market first, lest the market is taken away by others. Professor Hsu gave an example. The iPhone 14 was launched to replace the iPhone 13. Apple's products have been innovating all the time, and new products replace the old ones to avoid the market being taken and change the market share.

Continuing the previous discussion, Professor Hsu also mentioned Clayton Christensen, the author of *The Innovator's Dilemma*. He deliberately chose a different word, "Disruptive Innovation,"—to represent a particular type of innovation, a unique way of disrupting the market—to interpret creative disruption. Professor Hsu translated it into "Low-impact Innovation" and specifically mentioned that any innovation would inevitably cause market disruption of the original products.



Innovation Occurs in Technology Supply and Market Demand

Innovation is the application of a specific technology supply to a particular market demand, which is divided into two categories:

Technology Push Innovation

Based on the entry of technical resources into new markets and the market demand that technology can be applied to, Professor Hsu specifically said we could take stock of the company's current technologies and which products they can be applied to. For example, non-woven fabrics technology can be used in the production of masks, clean room filters, thermal insulation pads, and so on. But what else? This is what managers need to think about. The company has spent a lot of effort and time on technology development. However, where the developed technology is used, this matter needs to be discovered from the needs of customers, sales, and other industries. This part is essential but often overlooked.

Demand Pull Innovation

Introduce new technologies based on market demand, first see the market demand, and then find a solution. Professor Hsu gave an example: the cross-border application of game consoles – "game consoles for the elderly." Why doesn't anyone develop video games for the elderly to let them exercise and relax? If you use existing technologies, take stock of existing products, investigate the market for the elderly, and adjust existing technologies or patents, you can apply them to this market.

Innovation is the Recombination of Existing Elements Take the Product as an Example: Motor + Bicycle = Motorcycle

Harley-Davidson was recombined using the existing motor technology and bicycles. It is not easy to go from 0 to 1, but 0 is not created out of thin air, but to find opportunities from existing technical resources. Subsequent products will continue to evolve, but the overall structure will not change.

BMW entered the motorcycle market in 1923, and it must have some different technologies to have a chance to compete in the market. Therefore, it used its core technology, "rotating shaft transmission," to enter the motorcycle market.

Professor Hsu specifically mentioned the classification of innovations on the supply side (technical knowledge):

Incremental Innovation

Based on the existing knowledge base (patents, experts, special equipment), for example, Harley-Davidson motorcycles have advantages in the technical field of motorcycles. Then they use the existing technical knowledge to evolve products continuously.

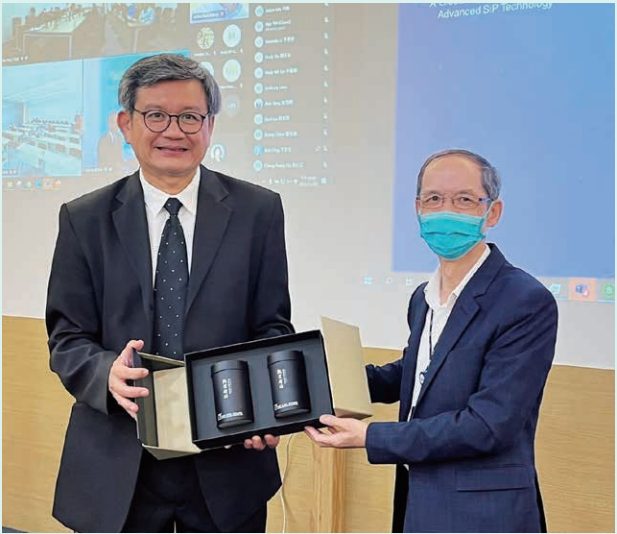
Radical Innovation

Based on the emerging knowledge base, for example, BMW entered the motorcycle market at that time, it was a new entrant, and it must have a different knowledge base to have a competitive edge. Therefore, BMW entered the motorcycle market by using the technology of rotating shaft transmission, allowing itself to stand on the same starting line as the big players in the market.

Do we continue to improve the old technology? Or develop new technologies like other companies? How should performance be assessed? These questions create a dilemma for many companies.

Who Has the Innovator's Dilemma

The new entry innovators do not because there is no existing customer base; all they have are new customers. After building a solid foundation, they are ready to enter the mainstream market.



The original big players will be in a dilemma. They must continue to innovate for old customers. Like BMW 4 sedans, they provide old-for-new discounts to stabilize old customers. Low-impact innovations target new customers, such as the BMW IX electric SUV, which focuses on the new market for electric vehicles.

Innovation can be approached from two perspectives: resources and markets. Enterprises can find new markets through resource changes or new technologies from the market.

At the end of his speech, Professor Hsu concluded that we should use various types of innovation to change technology, market, and industry competition dynamics to establish sustainable enterprise advantages.

驅動創新應用的 微小化技術

作者：台灣台北辦公室 / CE / MCC / R&D Div. / 沈里正
永續委員會 綠色產品與創新小組 總幹事 / 謝世南

SiP (System-in-Package) 系統封裝技術，是透過高度異質整合技術，使創新應用設計者可以如樂高積木般，隨選即用這些功能方塊，快速完成產品開發，在最佳成本效益與最短上市時間之下，向市場推出創新產品。

輕、薄、短、小、高效能及低耗能，一直是電子產業發展的方向。然而，面對益加複雜的功能需求、新世代晶片的複雜化與應用場域的多樣化，使得離散式的系統設計 (System on Board) 在整合、分析、測試、驗證等工程難度也越來越高，無形中減緩了創新應用的開發時程。因此，微小化技術應用需求驅動如圖一所示。



圖一 應用需求驅動模組化與微小化

實務上在與客戶提案交流過程中，常常遇到幾個關鍵迷思，包括：

採用 SiP 方案的成本，較 System on Board 高

如果僅關注於「元件成本與 PCBA 打件成本」加總來看，SiP 先透過半導體封裝技術，將部分元件先在載板上進行微縮集成與封裝，再與其他元件組裝到 PCB 上，相較於直接將所有離散元件一次性進行 PCBA，看似增加成本，但實則以偏概全。如圖二成本架構所示，SiP 的設計概念在於端對端 (End-to-End) 的全面最佳化，基本概念上是透過小區域高密度載板，將需要細線寬、高層數互聯的異質元件，先完成連接與整合測試，如此，不僅可以降低系統主板對於細線路與層數的要求，同時縮小板材，獲得 PCB 成本節省效益，並提高 PCBA 良率，以及整體可靠度。此外，省下了隱藏的後勤與備料成本，可以將資源更專心投注在產品研發創新上。

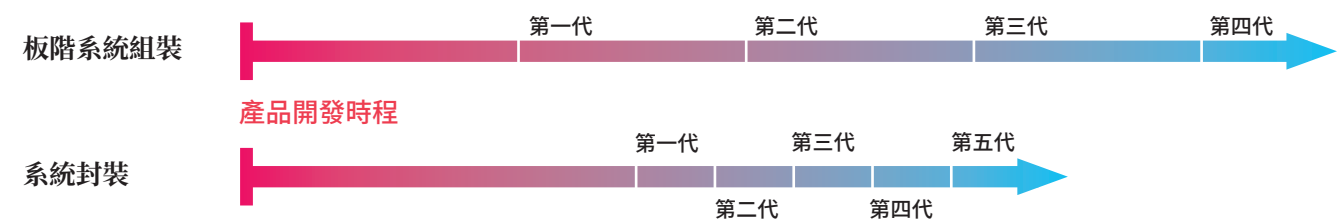
系統封裝成本最佳化 = Σ (元件, 載板, 組裝, 幾何尺寸, 生產良率, 可靠度, 後勤維運...)

- 更細的間距、更多的引腳數、數以百計的組件 / 區塊、異構、複雜的變異數

圖二 SiP End-to-End 的全面最佳化

採用 SiP 方案的產品開發時間較 System on Board 久

若僅有一代產品，產品壽命週期短，或是主功能晶片世代更迭快速，先進行模組開發，再進行系統整合主板所需時程，確實不如晶片直接上板組裝 (Chip on Board, COB) 來得有時效。但如果是多平台、衍伸機種多與主晶片具共通性，SiP 模組的共用性 (Re-usability) 則可以大幅提升後續產品開發的時效，如圖三示意。甚者，如果產品應用本身涉及驗證 (Certification)，以 SiP 為核心進行認證，相較於 System on Board 整機驗證，在時程與費用可以大幅節省。



圖三 以 SiP 為核心之設計效益比較

SiP 沒有標準的架構態樣 (Formfactor)

另一個常常在提案時被客戶質疑的：「SiP 太客製化，沒有標準，很難導入 2nd Source」，這必須回到 SiP 最核心的設計理念：

Co-Design of Si-Package-Module-System

一個完美的 SiP 設計必須兼顧電 (Electrical Performance)、熱 (Thermal Dissipation)、力 (Mechanical Stress & Reliability) 三個面向，同時要達到可以使用最少的布局層數、最經濟有效的線寬 / 距密度、最佳的模組效能裕度、密集化的干擾與相容、匹配系統組裝的幾何布局與散熱等，勢必要從晶片設計、封裝、模組，一路到系統，前 / 後段的協同設計。因此，要達到整體最佳化，必要的客製化勢不可免，同時，這也成為 SiP 製造者的核心競爭力。不過，針對泛用性與成熟的功能，例如：WiFi、WWAN，業界不同供應商間，已趨向共通的標準與介面，標準化仍是可行有效的。

未來趨勢與展望

SiP 除了在微縮、效能及可靠度上，展現工程與整體本益比優異的特性，其背後還有更深一層的綠色使命：微縮化代表耗用更少的材料 (減廢)、占用更少的空間 (省包材)，高效能代表更有效的電性連接與功耗 (節能)，高可靠度則使得產品製程良率高、使用壽命長 (減廢)，因此，模組化與微縮化的 SiP 技術與產品，不應是有可無 (Nice-to-Have)，而將成為必然的要素 (Must Have)，畢竟我們只有一個地球。

The Miniaturization Technology Driving Innovative Application

Author: Taiwan Taipei Office / CE / MCC / R&D Div. / Li Cheng Shen
Sustainability Committee Green Products and Innovation Taskforce / Coordinator / Pack Hsieh

SiP (System-in-Package) is through the highly heterogeneous integration technology to enable innovative application designers to select and use these functional blocks like Lego building blocks, quickly complete product development, and bring innovative products to the market with the best cost-effectiveness and the shortest time.

Light, thin, short, compact, high performance and low power consumption have always been what the electronic industry aims for regarding development. However, due to the face of increasingly complex functional requirements and the complexity and the diversification of application fields of new-generation chips, the engineering difficulty of discrete system-on-board in integration, analysis, testing and verification is getting higher. The higher difficulty it is, the development of innovative applications slows down imperceptibly. Figure 1 shows the driving application requirement for miniaturization technology.

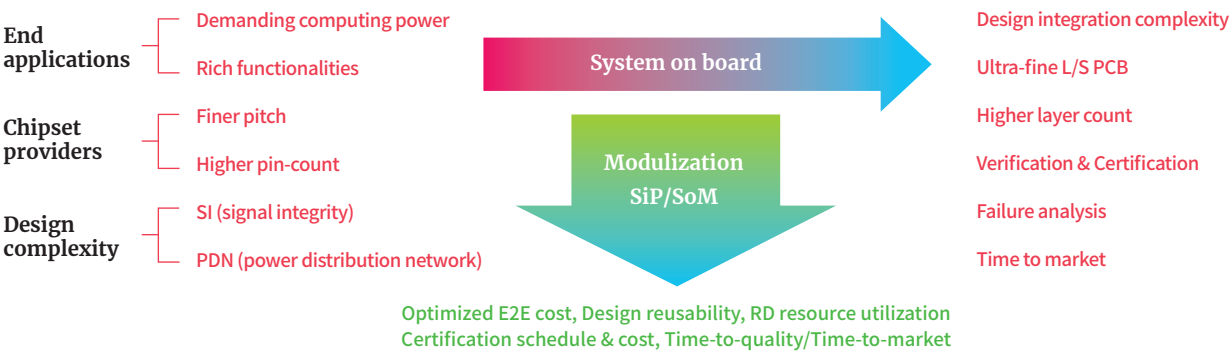


Figure 1 Application requirement driving modularity and miniaturization

When bringing up a proposal and interacting with customers, it turns out that clients often believe in some myths:

The Cost for SiP Project Is Higher Than System on Board

If we only focus on the sum of "component cost and PCBA assembly cost", SiP uses semiconductor packaging technology, firstly putting micro-integrate and packaging some components on the substrate and then assembling them on the PCB with other components. It seems to increase the cost to directly PCBA all the discrete components at one time, but it is actually a hasty generalization. As the cost structure shows in Figure 2. The design concept of SiP is comprehensive end-to-end optimization. The basic idea is to complete connection and integration tests for heterogeneous components requiring fine line width and interconnected high number of layers via a small-area high-density substrate. In this way, it can not only reduce the requirements of the system motherboard for thin lines and layers but also reduce the size of the board. The PCB cost can be saved and improve the PCBA yield rate and overall reliability. Moreover, the hidden logistics and material preparation costs can be saved. In addition, the hidden logistics and material preparation costs can be saved. The resources can be more utilized for product development and innovation.

Optimization in SiP = Σ (component, substrate, assembly, dimension, yield, reliability, logistics...)

- Finer pitch, higher pin-count, hundreds component/block, heterogenous, complex variation

Figure 2 SiP end-to-end comprehensive optimization

Development of a Product Adopting the SiP Project Takes Longer Than the Development of a Product Adopting System on Board.

If there is only one generation of products, the product life cycle is short, or the generation of main function chips changes rapidly, the time required for performing module development first, and then for system integration on the motherboard is indeed not as good as the chip on board assembly (Chip on Board, COB). However, If multiple platforms and extended models are available and there is a commonality with the main chip, the re-usability of SiP modules can greatly improve the timeliness of subsequent product development, as shown in Figure 3. What's more important, if the product application itself involves certification (Certification), using SiP as the core for certification can be saved remarkably compared to overall system-on-board verification.

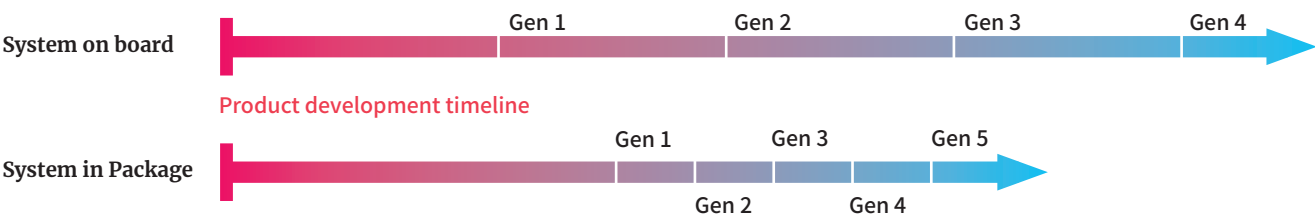


Fig. 3 Comparison of design efficiency based on SiP

SiP Has No Standardized form factor

Another question that is usually questioned by customers when we bring up proposals is: "SiP is too customized, there is no standard to be followed. It is difficult to have 2nd Source". So, it must go back to the core design concept of SiP:

Co-Design of Si-Package-Module-System

A perfect SiP design must take into account the three aspects of electrical Performance, thermal dissipation, and force mechanical stress & reliability to achieve the least number of layer assignments, the most economically effective line width/spacing density, the optimal module performance allowance, intensive interference and compatibility, matching geological layout and dissipation of system assembly at the same time, chip design, packaging, modularity and all the way to the system, front/back-end co-design are required. As a result, to accomplish overall optimization, essential customization is inevitable. In the meantime, it becomes the core competitiveness of the SiP maker. Nevertheless, different suppliers in the industry have gradually adopted common standard interfaces for generalities and mature functionality, such as WiFi and WWAN. Standardization is still feasible and effective.

Trend and Prospect

Besides showing superior engineering and overall profit-to-cost ratio in miniaturization, performance, and reliability, there's a deeper green mission that SiP must fulfill: Miniaturization means less material consumption (waste reduction), less space (packaging material reduction), high performance means more effective electrical connection and consumption (energy saving), and high reliability leads to high product process yield and long service life (waste reduction). Therefore, modularity and miniaturization of SiP technology and product will be must-haves and should not be considered nice-to-haves. After all, we only have one Earth.

印象深刻的展覽

Impressive Exhibitions

01

台灣南崗廠 / AMMS / MWC / 陳靜萍
Taiwan Nankang Site / AMMS / MWC / Vivian Chen

台北華山藝文特區 Huashan 1914 Creative Park, Taipei

在這個名為「我們的家」的展覽中，藉由一幅幅不同主題的木製插畫，帶領我們探索從古至今，人與樹木的故事，也讓我們了解與自然共存的深刻意義。In this exhibition "Our Home", the wood illustrations with different themes lead us to explore the stories of people and trees from ancient times to the present and let us understand the profound meaning of coexistence with nature.



02

台灣南崗廠 / AMMS / MWC /
測試暨軟體開發中心 / 曾其誠
Taiwan Nankang Site / AMMS / MWC / TD & SW
Center / Stanley Tseng

法國羅浮宮 Louvre Museum

一名畫家正在臨摹壁上展覽的一幅畫，畫中人物是約瑟芬皇后，她是拿破崙畢生的摯愛。

An artist is copying a painting on a wall display of Empress Joséphine, the lifelong love of Napoleon.



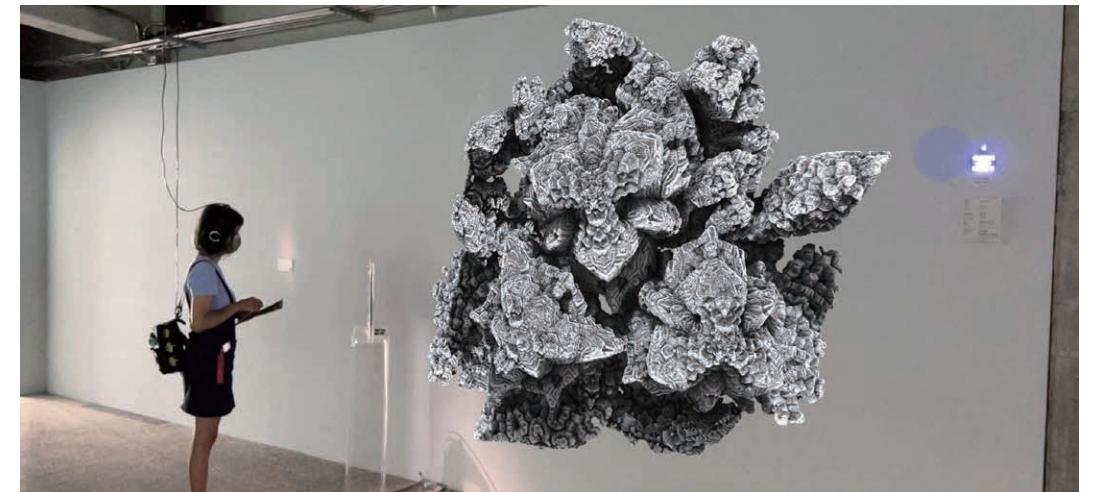
03

台灣草屯廠 / GS&S/COD/NA/SA / 全球資源管理總處 / 陳麗蒂
Taiwan Tsao-tuen Site / GS&S/COD/NA/SA / COD / Liddy Chen

高雄金馬賓館當代美術館 ALIEN Art Centre, Kaohsiung

AR 互動式創作《音花》，自展覽中十首歌曲各擷取一段音頻，透過電腦程式分析，並以聲音頻率衍生出花朵。展現源源不絕、豐沛的設計能量。

The AR interactive creation "Euterpe" extracts a piece of audio from each of the ten songs in the exhibition, analyzes them through the computer program, and derives a flower from the sound frequencies. The exhibition will showcase the endless and abundant design energy.



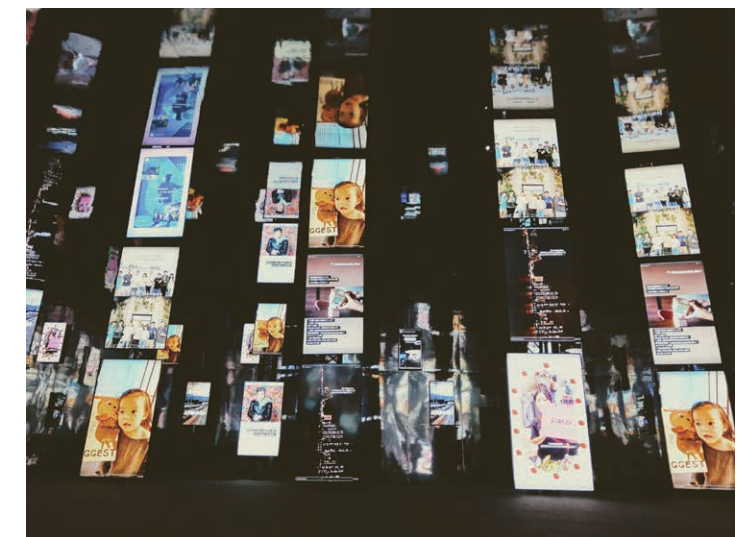
04

台灣南崗廠 / ICS&TW OPS / VPS /
VMS PLM / 鐘凱彥
Taiwan Nankang Site / ICS&TW OPS / VPS /
VMS PLM / Kyan Chung

高雄駁二藝術特區 The Pier-2 Art Center, Kaohsiung

2022 台灣設計展之限動索引，用百面液晶電視牆，將限時動態、串流影音以萬花筒方式呈現，沉浸式體驗青春限動。

In the exhibition "Youth Story" of 2022 Taiwan Design Expo, there are walls which are combined with hundreds of LCD TV screens to present stories and streaming videos in a kaleidoscopic manner, providing an immersive experience of youth stories.



昆山
Kunshan



科技環鴻 璀璨未來 USI(KS) *Brighten the Future*

作者：昆山廠 / SZ&HZ&KS / 行政管理部 / 王麟瑩
Author: Kunshan Site / SZ&HZ&KS / ADM / Lynn Wang

2022 年是我們眾志成城，共克時艱的抗疫年，也是我們堅韌不拔，砥礪前行的奮進年。久違的歡聚必然也有我們的 David、Andrew、Eric 三位大家長，以及各位嘉賓的到來。

強大的主持陣容氣場非凡，更特邀嘉賓主持人林子涵助陣本次晚會，主持人們郎才女貌，主持功底深厚使得晚會氣氛 High 翻全場。

David、Andrew、Eric 上臺致辭，表達對所有同仁這一年來的辛苦付出，以及對未來的展望與暢想，一字一句都是滿滿的欣喜與鼓舞，是對我們每一個人的加持與肯定。

處主管們的 Cosplay 加上當下最流行的黑桃 A 燃爆全場，首個開場秀就將晚會推向高潮，讓大家看到了平時勤勤懇懇工作的主管們可愛的模樣。

晚會過半，天空逐漸下起了小雨，但這絲毫不影響我們的熱情。部主管們在雨中用一首《我的好兄弟》

帶給我們無限感動。David 邀請 Andrew、Eric 以及所有處主管們上臺演唱的《孤勇者》更是鼓舞人心，體現出我們齊心聚力和風雨無阻的精神。當然，晚會也少不了每個部門的節目，積極可愛的夥伴們不懼風雨的唱跳著，展現青春活力，每個節目都是大家心中的 NO.1！

公司為同仁準備了 800 多個獎項，驚喜不斷獎品多多。有現金 12,000 元、iPhone14、iPad、還有小毛驢電動車。最後為感謝大家風雨中的堅守，Eric 再次加碼兩位 6,000 元的現金！

大小朋友喜愛的炫酷光電遊園項目，通關集勳章兌換暖心伴手禮；特色小吃、香辣滷味、甜蜜西點、傳統手工美食等 130 餘種特色組成的美食街；高級大氣的打卡簽名牌和漠河小鎮同款炫美極光，無一處不讓人流連忘返。

今年的努力終有果，待來年再創佳績。讓我們繼續不忘初心，團結拼搏，立足新里程，書寫新篇章，共同實現最美的夢想！



2022 was a year of fighting against the epidemic, in which we worked together to overcome the difficulties. It is also a progress year of perseverance and moving forward. The long-lost gathering must also include our three leaders, David, Andrew, and Eric, as well as our distinguished guests.

The powerful host team has an extraordinary aura, and we even invited the particular guest host Zihan Lin to help out with this party. The hosts are perfect together. Their solid hosting skills made the atmosphere high and turned the audience up.

David, Andrew, and Eric made speeches on stage, expressing their joy and encouragement to all colleagues for their hard work this year. Also, they shared their vision and imagination for the future with everyone. Their words were a blessing and affirmation to each of us.

The cosplay of the directors and the most popular Ace of Spades were spotlighting. The first opening show brought the party to a climax and let everyone see the lovely appearance of the diligent directors.

In the middle of the party, the sky gradually began to rain, but this did not affect our enthusiasm. The managers moved us infinitely with the song "My Buddy" in the rain. David invited Andrew, Eric, and all the directors to sing "Lonely Warrior" on stage, which is even more inspiring, reflecting our spirit of unity and rain or shine. Of course, each department's

program is indispensable to the party. The active and lovely partners sang and danced despite the rain, showing their youthful vigor. Every program was No.1 in everyone's hearts!

USI(KS) has prepared over 800 awards for colleagues, with many surprises and prizes. There are RMB 12,000 in cash, iPhone 14, iPad, and electric scooters. Finally, to thank everyone's perseverance in the rain, Eric added an extra RMB 6,000 cash prize to two more employees!

There was a dazzling photoelectric park visiting project that friends of all sizes loved during the activity. Employees can get sweet souvenirs by clearing stages to collect stamps. There was also a food street with more than 130 characteristics, such as specialty snacks, spicy braised dishes, sweet pastries, and traditional hand-made food. In addition, we also have the high-class and outstanding signature card and the beautiful aurora of like Mohe City. There is no place where people will linger and forget to return.

This year's efforts will finally bear fruit, and we will achieve even better results in the coming year. Let us stay true to our original aspirations, unite and work hard, gain a foothold in new milestones, create new future, and realize the most beautiful dreams together!

越南
Vietnam

USI 海防廠：奇蹟創造者

USI(HPH): *The Miracle Creator*



作者：越南海防廠 / ALCMM / HPH OPS / Emma Vu
Author: Vietnam Haiphong Site / ALCMM / HPH OPS / Emma Vu

經過長達兩年的隔離，2022 年 12 月 17 日，海防廠為所有員工舉辦了一場年會活動，開幕式以一段簡短的 3 分鐘視頻開始，勾起了大家無數的回憶。回溯 2022 年，我們感觸頗深。這段錄影訴說我們共同經歷了為期一年的大冒險，共享無數的回憶。董事長陳昌益先生、總經理暨營運長魏鎮炎先生和集團資深副總曹憬先生通過視頻向全體員工致上新年問候和祝福，肯定 2022 年取得的成績。此外，他們還表達了對員工的期望，希望我們為充滿挑戰的新一年做好準備，在 2023 年創造新的奇蹟。

2022 年有許多起伏和挑戰。儘管自成立海防廠那天，COVID-19 就設下重重關卡與阻礙，但海防廠，特別是所有的員工，都在努力朝著企業的前景和目標一起努力著。我們不斷改進我們的產品，並準備好以無限的潛能跟幹勁來迎接新專案。

隨後，廠總經理劉惠民先生上台致詞，對這一年來的營運情況進行評價，並祝願全體員工在新的一年健康快樂。為了感謝員工的貢獻，廠總經理惠民授獎給表現突出的員工，並邀請他們的家人一同上台分享榮譽。頒獎環節也同時頒發了 CI 得獎者和 5S 冠軍證書。

晚會期間，觀眾欣賞了七個部門團隊的精彩表演。每個表演背後都有一個極具意義和傳統的故事，動人心弦。此外，最令人期待的活動就是「幸運抽獎」了，廠總經理劉惠民和工會主席 Lily Nguyen 應邀抽出了許多獎品給幸運的中獎者們。

2022 年會就在掌聲、喜悅、自豪和感動的時刻中圓滿結束。我們堅信，在美好的未來，美好、新鮮、快樂的事物永遠會陪伴著每一個人—2023 年，我們將打開一個新的局面。我們相信，在全體員工的團結努力下，海防廠將為 USI 做出更大的貢獻。



On December 17th, 2022, HPH Site prepared a Year-End Live Party for all employees after a two-year quarantine. The opening started with a brief 3-minute video that brought back countless memories. We were all brought back to the 2022 journey with many feelings. The footage reminded we had experienced a great year-long adventure together and shared countless memories. The Chairman, Jeffrey Chen, President & COO CY Wei and Corp. SVP Jim Cao congratulated the HPH Site's accomplishment in 2022 and extended the new year greeting and blessing to all employees via video. Furthermore, they expressed their expectation to all employees to prepare for a new challenging year and work together towards a miracle in 2023.

There are many ups and downs challenging in 2022. Although numerous challenges have been coming from COVID-19 since the established date, HPH Site, especially all the employees, have endeavored to work together towards the corporate vision and objective. We have kept improving our products and getting ready to run the new project with limitless inner strength and energy.

After that, Site GM, Huimin Liu, gave a speech to evaluate the one-year business and wished all the staff a happy and healthy new year. To thank employees for their contributions, Huimin presented awards to outstanding performance employees, and their families were invited to share the honor. CI winners and 5S Champion Certificates were awarded as well.

Throughout the party, the audience enjoyed astonishing performances from seven teams representing each department. Each performance had a meaningful and traditional story. All of them genuinely touch the audience's feelings. Besides, the most awaited event was the "Lucky Draw" Site GM, Huimin Liu, and Labor Union Head, Lily Nguyen, were invited to draw many prizes for the lucky members.

The 2022 Year-End Party ended successfully with applause, joy, pride, and touching moments. We firmly believe in a bright future where good things, freshness, and happiness are always there for each of us—opening a new horizon in 2023. We believe that with all employees' consensus and efforts, the HPH site will grow with more contributions to USI.

上海
Shanghai



感恩有你 迎戰 2023 Grateful for You, *Let's Go 2023!*

作者：上海張江廠 / ALCMM / 總務部 / 朱琳鑫

Author: Shanghai Zhangjiang Site / ALCMM / General Affairs Department / Hannah Zhu

2023年1月6日，USI上海區線上嘉年華如約而至！董事長陳昌益先生和總經理暨營運長魏鎮炎先生致上新年祝福，表達與同仁們攜手並進的期許和對去年一起共度重大挑戰的感恩之情。同時祝同仁們身體健康、幸福喜樂！

上海區總經理曹景先生的致辭中特別說明親自撰擬的年會主題「感恩有你，迎戰 2023」中的深刻含義：在同仁們的共同努力下，我們一起克服了疫情，2022 年上海區營收和利潤更是達到了一個新的里程碑！希望在新的一年里裡，面對新的挑戰，我們能繼續團結一心，提升競爭力，在 2023 年取得更好的成就！

年會的獎品精彩紛呈，不僅有 iPhone、AirPods Pro、Apple Watch、iPad Pro，還有六千元的加碼大獎！董事長更通過連線加碼十萬元驚喜現金獎！今年還有個暖心小插曲：上海區總經理體恤員工，將

年會抽獎獲得的 iPad Pro 轉贈給了公司的優秀工程師！通過螢幕都能感受到大家激動的心情。同時還有數不勝數的購物卡和口令紅包，相信在 2023 年同仁們也能好運連連、驚喜不斷！

動聽的歌曲串燒為大家帶來了一場視聽盛宴，精彩的舞蹈動感十足，部門祝福視頻更是精彩連連，驚喜不斷，同仁們真的是藏龍臥虎，多才多藝！

為了表達對同仁們的感恩以及對新年的期許，主管們精心準備了一首《明天會更好》，期望如歌詞中所言「讓我們的笑容充滿著青春的驕傲！讓我們期待明天會更好！」

歲月不拘，天道酬勤。難忘的 2022 我們共同度過，憧憬的 2023 我們共同迎來。祝願 USI 在新的一年里裡繼續乘風破浪，再創佳績。祝願所有的同仁們兔年吉祥、萬事順意！



On January 6th, 2023, the online Year End Party of Shanghai Sites came as scheduled! Chairman Jeffrey Chen and President & COO CY Wei sent their New Year greetings, expressing their expectations of advancing hand in hand with colleagues and their gratitude for overcoming significant challenges together last year. At the same time, they wished the colleagues good health and happiness!

GM of Great Shanghai Area Jim Cao specifically explained the profound meaning of the theme of the party "Grateful for You, Let's Go 2023!" that he personally wrote in his speech: With the joint efforts of our colleagues, we have overcome the pandemic together. In 2022, the revenue and profit of Shanghai Sites have reached a new milestone! I expect that in the new year, in the face of new challenges, we can continue to unite as one, enhance our competitiveness, and achieve better accomplishments in 2023!

The prizes at the party were spectacular, including iPhones, AirPods Pro, Apple Watch, iPad Pro, and an extra prize of RMB\$6,000! Chairman Jeffrey even added a surprise cash prize of RMB\$100,000! There

was also a heartwarming moment this year: Jim cared for the employees and gifted the iPad Pro won by the lucky draw at the annual party to the outstanding engineer! Everyone's excitement can be felt through the screen. At the same time, there are countless gift cards and red envelopes. We believe that in 2023, USIers will also have great fortunes and surprises!

The melodious music brought everyone an audio-visual feast, the fabulous dance was full of energy, and the blessing videos from each department were even more exciting and full of surprises. Colleagues really are the potential talents!

To express their gratitude to colleagues and their expectations for the New Year, the supervisors prepared a song, "Tomorrow Will Be Better." Hope is as the lyrics say, "Let our smiles be full of youthful pride! Let us look forward to a better tomorrow!"

We overcame the unforgettable 2022 together, and we will welcome the exciting 2023 together. Wish USI will continue to ride the wind and waves and achieve great results in the new year. Wish all colleagues auspicious and good luck in the Year of the Rabbit!

贏領科技 推動未來 Lead the Technology *Promote the Future*

作者：總經理室 / 行銷企劃部
Author: President Office / Marketing Communication



USI 臺灣廠於 1 月 12 日在全新啟用的南崗二廠舉辦睽違已久的年會活動。雖然受到疫情限制，已是連續第三年以小型年會的方式辦理，不過卻是首次在新廠區的挑高大廳進行，與會的每一位高管及同仁，心情都為之雀躍，期待著即將登場的活動內容。

總經理暨營運長 CY 的新年祝福，為整個活動揭開序幕，CY 表示公司去年度因為業務的持續發展，新增南崗二廠，讓整個 USI 別開生面，期許新廠的啟動，能貢獻更多的業績成長。董事長 Jeffrey 也提到，3 年前 USI 的年營收僅 1,500 億台幣，至今已經突破 3,000 億台幣，2022 年的營業額和獲利更是創歷史新高，因此廠區持續擴增，期待在臺灣能有更長遠的發展。這三年來經歷疫情、大缺料，面臨這般挑戰，USI 每年仍然持續創下新高峰，更是實屬難得。新的一年、全新起點，期許臺灣同仁們一起迎向挑戰，抬頭挺胸更上一層樓。

能夠攀上高峰，首要感謝的是每一位在 USI 投入青春的資深及模範員工，上百位在 USI 服務 10 年以上的資深員工，其中也包括服務 25 年的資深副總 Clement 與副總 Kevin、Aaron，以及服務 35 年的資深副總 Gilbert，憑藉著諸位多年來的支持和忠誠，USI 才能有此般成就。同樣也讓 USI 引以為傲的，是出色的技術和研發團隊，透過獎勵研發競賽、最佳發明團隊暨發明王及 CIP 卓越貢獻獎等獎項的

鼓勵，正向循環推動著源源不絕的新創意，將廣闊無邊的想像力成功付諸實行。

綜觀 2022 年獲利的好表現，USI 也不吝與員工分享，今年度最大獎的金額同樣也創新高！由 Jeffrey、CY 與高管們陸續抽出幸運得主。與會的每一位同仁都興奮的引頸期盼這份大紅包，盼望著好運能為自己新的來年增添喜氣、討個吉利，今年的年會活動就在一片歡呼及讚嘆聲中成功落幕。

一年的落幕，同時也代表著新的開始，USI 在 2023 年將繼續贏領科技，推向新高峰！為最重要的每一位同仁夥伴送上新年祝福，祝福各位「前兔似錦、兔飛猛進，Stay Healthy」！



On January 12th, Taiwan Site held the long-awaited annual Year End Party in the newly established NK2 Site. Although it is the third consecutive year that the annual event has been held in a compact form because of the epidemic, it is the first time in the high-ceilinged hall of the new factory. Every executive and colleague attending the meeting was excited and looking forward to the upcoming events.

The New Year greetings from President & COO CY kicked off the party. CY said that last year, due to the continuous business development, USI established the second factory in Nankang, which brought a new life to the entire USI. It is hoped that the start-up of the new factory will contribute to more business growth. Chairman Jeffrey also mentioned that USI's annual revenue was only NT\$150 billion three years ago, and it has exceeded NT\$300 billion so far. In 2022, the turnover and profit hit record highs. Therefore, USI's footprints continue to expand, and we look forward to longer-term development in Taiwan. In the past three years, after experiencing the pandemic and significant material shortages, facing such challenges, it is really rare for USI to continue to hit new peaks every year. With a new year and a new starting point, Jeffrey expects that USI colleagues in Taiwan will face the challenges together and reach new heights.

We are grateful to every senior and model employee who has devoted their youth to USI for reaching the

achievement. Hundreds of senior employees have served USI for over ten years, including SVP Clement, VP Kevin and Aaron, who have served for 25 years, and SVP Gilbert who have served for 35 years. USI is where it is now because of everyone's support and loyalty over the years. USI is also proud of its excellent R&D team. The positive cycle promotes an endless stream of new ideas through the encouragement of awards such as the R&D Competition, the Best Invention Team and the CIP Contribution Award. It successfully puts the vast and boundless imagination into practice.

Looking at the excellent profits in 2022, USI will not hesitate to share with employees, and the amount of the biggest prize this year also hits a new high! The lucky winners will be drawn by Jeffrey, CY and executives. Every colleague at the meeting was excitedly looking forward to this big red envelope, expecting that good luck would add joy and prosperity to their new coming year. This year end party ended successfully amidst cheers and admiration.

The end of one year also represents a new beginning. USI will continue to lead the technology and push it to new heights in 2023! USI would like to send New Year greetings to each of the most important colleagues and partners and wish everyone "a bright future and great progress in the Year of the Rabbit! Stay healthy!"

2023 福兔賀歲 辭舊迎新

Lucky Rabbits Celebrate the New Year

Let's Welcome 2023

作者：Asteelflash 蘇州廠 / 人力資源部 / 潤翠翠
Author: Asteelflash Suzhou Site / Human Resources / Nina Run

送金虎，碩果豐收千里豔；迎玉兔，宏圖再展萬年青。為迎接 2023 癸卯兔年的到來，蘇州廠開展了鬧新春，迎兔年的春節活動。

最幸福的事莫過於大家歡聚一堂，迎祥納福。為陪伴春節留守的員工一起過除夕，公司不僅準備了豐盛的年夜飯及各類零食小吃，還現場安排了趣味遊戲競賽，精美禮品贈送等活動環節，讓大家在歡聲笑語中度過一個難忘的除夕夜。

大家聚在一起熱熱鬧鬧享年夜飯的同時，幸運兒們又有獎品可以領取，開開心心過大年！幸福一年又一年！現場活動由「極限腦力」遊戲拉開了序幕，接下來分別進行各個抽獎比拚環節。

兔圍而出：現場分組五子棋對弈，率先形成五子連珠的小組獲勝，考驗團隊合作及快速反應的時候到了，

獲勝者現場立即送出精美禮品；兔飛猛進：通過花樣跳繩比賽及瘋狂趾壓板遊戲來爭奪抽獎機會；男女搭配，一點不累，一人背起另一人拼盡最後一程，為大家的勇氣及堅韌點讚！錢兔似錦：隨機拆盲盒接受不同的任務挑戰，完美呈現給現場人員即獲得紅包。員工們個個都是才藝高手，紛紛給家人現場連線送祝福、贈曲一首致朋友、謝同事。

通過 3 個環節的遊戲比拚，最終產生了 115 名幸運員工，恭喜幸運的飛旭員工們！大家在一起就是「兔」個樂！

在這新春佳節來臨之際，飛旭蘇州廠向全體職工致以新春的問候和誠摯的祝福，祝大家兔年大吉，大展鴻兔，福兔賀春，財源旺盛！

We farewell to the golden tiger, and the achievement will be rich ; we welcome the jade rabbit, and the grand future will be evergreen. To welcome the coming Year of the Rabbit in 2023, Suzhou Site launched a Chinese New Year celebration.

The happiest thing was everyone gathered together to receive good luck and happiness. To accompany the employees who stayed during the Spring Festival to spend New Year's Eve together, not only the company prepared a sumptuous New Year's Eve feast and various snacks but also arranged fun games, exquisite gifts, and other activities. Let everyone spend an unforgettable New Year's Eve with cheer and laughter.

While everyone gathered to enjoy the New Year's Eve Feast, the lucky stars would have prizes to receive and celebrate the New Year happily! Happy year after year! The live event started with the "Extreme Brain Power" activities, followed by various games.



Excelling Rabbits: People are divided into groups for Gomoku games. The first group to form Gomoku is the winner. It is time to test teamwork and quick reflex. The winners will immediately receive exquisite gifts. Flying Rabbit: Compete for the lottery draw with a rope skipping competition and a crazy Shiatsu board game. Men and women match, one person carries the other on his back and fights for the last journey, praise for everyone's courage and tenacity! Money rabbit: Randomly open the blind box to accept different task challenges and present it perfectly to the personnel to get a red envelope. All the employees were talented; they sent blessings to their families online, a song to their friends and colleagues.

Through 3 game competitions, 115 lucky employees won the prizes. Congratulations to the lucky employees! Everyone gathered together to enjoy the Year of Rabbit.

As the Chinese New Year is approaching, Asteelflash Suzhou Site would like to extend Chinese New Year greetings and sincere blessings to all employees. We wish everyone a prosperous, happy, and great Year of the Rabbit.





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